THE GREAT IDEAS

A Syntopicon of Great Books of the Western World

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VOLUME II



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EXPLANATION OF REFERENCE STYLE

THE references have a uniform typographical style but the manner of referring to particular works varies in certain respects The Explanation of Reference Style describes the typographical construction of the references, with some comment on the variations It is divided into four parts

I General Typographical Style

II Style of Bible References

III Punctuation Symbols Abbreviations

IV Table of Authors Titles, and Author s Divisions Cited

I GENERAL TYPOGRAPHICAL STYLE

The two examples below illustrate the general typographical pattern of the references to *Great Books of the Western World* and the headings above the examples call attention to the five elements commonly present in the construction of the references

Volume Number	Author's Name	Title of Work	Author's Divisions	Page Sections
35	Locke	*Human Understanding*	BK II CH XXI	178a 200d
41	Gibbon	*Decline and Fall*		365b 378d

(1) Volume Number

The volume number indicates in which volume of *Great Books of the Western World* the work or passage referred to can be found Most volumes contain the work of one author When a single volume contains the works of two or more authors the volume number is given for each author When the work of a single author is contained in two volumes the volume number is assigned according to the contents of the volume

(2) Author s Name

The author s name immediately follows the volume number except in the case of the American State Papers and the Federalist, which are included in Volume 43 Authors names are usually given in shortened form.

(3) Title of Work

The title follows the author s name with the two exceptions above noted Titles are also frequently abbreviated or shortened When two or more works are cited for a single author the titles are listed in the order in which the works appear in the volume

(4) Author s Divisions

By author s divisions is meant all such subdivisions of a work as book part section chapter paragraph line number The phrase author s divisions does not necessarily mean divisions made by the author they may have been made by an editor of his work

Author s divisions are given only for some works according as in the judgment of the editors their inclusion would prove meaningful or helpful to the reader References to Locke for instance as in the example always cite author s divisions whereas references to Gibbon as in the example do not

For some works author s divisions are completely given as for Locke For other works only the most important or largest divisions are given Thus for Rabelais only the book but not the chapter is given

Line numbers in brackets are given for all works of poetry, including those published in prose translations For Goethe s *Faust* the line numbers cited refer to the lines of the English translation as well as to the lines of the original German *For other poetical works in translation—the* works of Homer the Greek dramatists Lucretius Virgil and Dante—the line numbers cited refer to the lines of the works in their original languages for these works the line numbers printed on the pages of this edition furnish only an approximate indication of the location of the *equivalent lines in the English translation For all poetical works written in English the line numbers are the numbers of the English lines In the* case of Chaucer s *Canterbury Tales* the numbering of the lines is consecutive for all the tales written in verse

In references to the works of Aristotle (in Volumes 8 and 9) the figures and letters enclosed in the brackets signify the page column and approximate line in the Berlin edition of the Greek text edited by Immanuel Bekker *In references to the American State Papers* (*in Volume* 43)

the bracketed line numbers refer to the lines on the pages of this edition only

In references to the *Summa Theologica* of Thomas Aquinas (in Volumes 19 and 20) the author s division Part I–II stands for Part I of the Second Part and Part II–II stands for Part II of the Second Part In the case of the *Summa Theologica* the author s divisions cited may include not only questions and articles but the subdivisions of articles In such cases the page sections correspond in extent to that of a whole article to enable the reader to see the subdivision of an article when it is cited in the context of other parts to which it is related

Author s divisions precede page sections except in the case of footnote and note numbers which follow page sections When more than one passage is cited within the same author s division the author s division is not repeated, as, for example

38 ROUSSEAU *Social Contract* BK II 403a 404a 405d 406a

(5) Page Sections

The pages of *Great Books of the Western World* are printed in either one or two columns The upper and lower halves of a one-column page are indicated by the letters a and b When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand column the letters c and d to the upper and lower halves of the right hand column These half and quarter page sections are based on divisions of a full text page

Page sections give the page numbers and locate the sections of the page in which the passage referred to begins and ends For example in the reference

53 JAMES *Psychology* 116a 119b

the passage cited begins in the upper half of page 116 and ends in the lower half of page 119 In the reference

7 PLATO *Symposium* 163b 164c

the passage cited begins in the lower half of the left hand column of page 163 and ends in the upper half of the right hand column of page 164

In references to works printed in two columns the format of the page

sometimes places continuous reading matter in the a and c sections of the upper half of the page, or in the b and d sections of the lower half of the page This occurs when a work or an author s division begins in the lower or ends in the upper half of the two column page Where continuous reading matter thus appears in discontinuous page sections it is indicated by a c or b d For example

14 PLUTARCH *Solon* 64b d 77a c

means that the work cited begins in the lower half of page 64 and ends in the upper half of page 77

Footnotes or notes are sometimes specifically cited by themselves in the references in which case the page sections given correspond to their location on the pages referred to When a footnote or a note is not specifically cited the page sections given mark the beginning and the end of the text referred to The reader is expected to consult the footnotes or notes indicated in the body of that text

Chaucer s works (in Volume 22) are printed in two columns the inside column of each page contains the Middle English text the outside column a Modern English version Since both columns contain equivalent passages the references to this volume employ page sections (a and b) which divide each page only into an upper and a lower half

II STYLE OF BIBLE REFERENCES

All Bible references are to book chapter and verse in both the King James and Douay versions of the Bible When the King James and Douay versions differ in the title of books or in the numbering of chapters or verses the King James version is cited first and the Douay indicated by a (*D*) follows For example

OLD TESTAMENT *Nehemiah* 7 45—(*D*) *II Esdras* 7 46

In references to the Bible a colon is used to separate chapter and verse numbers and a comma separates the numbers of verses in the same chapter For example

OLD TESTAMENT *Exodus* 6 1–4 16–18

III PUNCTUATION SYMBOLS, ABBREVIATIONS

(1) Punctuation

Diagonal line When a series of references to one author includes two or more of his works published in the same volume a diagonal line is used to separate references to one work from references to another The diagonal line is used in the same way to separate references to different books of the Bible. For example

OLD TESTAMENT *Exodus* 33 12–23 / *Job* 11 7–9
43 MILL *Liberty* 302d 303a / *Representative Government* 327b d 332d

Semi Colon When a series of references includes the citation of two or more passages in the same work a semi-colon is used to separate the references to these passages For example

OLD TESTAMENT *Genesis* 1 12–14 9 1–11
38 ROUSSEAU *Social Contract* BK II 403a 404a 405d 406a
46 HEGEL *Philosophy of History* PART II 265c 266a PART IV 346c 348a

Comma When a comma separates the title of a work, or an author s division of a work from the page sections which follow passages cited are only a part of the whole work or of the author s division indicated For example in the references

14 PLUTARCH *Lycurgus* 36a b 44d-45c
36 SWIFT *Gulliver* PART II 73a 74b

the passages from Plutarch are only a part of *Lycurgus* and the passage from Swift is only a few pages from Part II of *Gulliver s Travels*

When the title of a work or an author s division of a work is *not* separated by a comma from the page sections which follow the reference is to the whole work or to the whole of the indicated author s division For example in the references

14 PLUTARCH *Lycurgus* 32a-48d
36 SWIFT *Gulliver* PART II 45a 87b

the whole of *Lycurgus* and the whole of Part II of *Gulliver s Travels* are cited

(2) Symbols

esp The abbreviation esp precedes one or more especially relevant passages which are contained within the page boundaries of a larger passage or a whole work that has just been cited

Whenever passages contained within a single reference are especially referred to a comma after the page sections separates these passages For example

> 42 KANT *Science of Right* 435a 441d esp 435c 436b 437c-d 438d 441d

Whenever passages contained within a single reference to the Bible are especially referred to a comma is also used to separate these passages For example

> NEW TESTAMENT *Romans* 1–8 esp 2 11–16 2 27–29 7 21–25 8 27

passim The word passim following a reference signifies that the work or passage referred to discusses the topic under which it is cited, intermittently rather than continuously For example

> 9 ARISTOTLE *Politics* BK II CH 7 461d 463c passim / *Athenian Constitution* CH 1–41 553a 572d passim

(3) Abbreviations

The following is a list of the abbreviations used in the references Unless an abbreviation for the plural is listed below the singular abbreviation is used for both singular and plural words

A	ARTICLE	[n]	note
AA	ARTICLES	OT	OLD TESTAMENT
ANS	ANSWER	par	paragraph
APH	APHORISM	PREF	PREFACE
BK	BOOK	PROP	PROPOSITION
CH	CHAPTER	Q	QUESTION
COROL	COROLLARY	QQ	QUESTIONS
(*D*)	DOUAY	REP	REPLY
DEF	DEFINITION	SC	SCENE
DEMONST	DEMONSTRATION	SCHOL	SCHOLIUM
DIV	DIVISION	SECT	SECTION
EXPL	EXPLANATION	SUPPL	SUPPLEMENT
[fn]	footnote	TR	TRACTATE
INTRO	INTRODUCTION		

IV TABLE OF AUTHORS TITLES AND AUTHOR S DIVISIONS CITED

The following pages present a tabulation of the contents of *Great Books of the Western World,* Volumes 4–54 The authors are enumerated in the order in which they appear in the successive volumes of the set and under each author s name the titles of his works are listed in the order of their appearance

In the references the name of the author is frequently given in shortened form In this table their full names are given followed by their life dates when these are ascertainable Because some volumes contain the works of two or more authors who may be separated by centuries the order in which the authors are cited in the references sometimes departs from the strict chronological order The life dates help the reader to place the authors and their works in the right chronological order

In the references the title of a work is frequently given in an abbreviated or shortened form In this table the titles are first given exactly as they appear in the references Whenever this is an abbreviated or shortened title the full title follows

The table also includes a notation of the author s divisions that are used in references to particular works

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A dash in the column head d Author s D is ns C ted means that references to the work or works in question cite pag sections only Wh re the author s d visions c ted a e the same for several t tles they are na ned only once either opposite the set of titles as a wh le or opposite the last t tle n the group

Titles in brackets are collect ve titl s which appear on the title p ge of the wo k but do not appear in the refe ences The names of the autho s of *The Federa'ist* (in V lume 43) are bracketed because they do not ppear in the references

V lume Number A h a d Title		*Author s Divisions C ted*
4 HOMER		
The Il ad	*The Odyssey*	BOOK Line
5 AESCHYLUS (525–456 B C)		
The S ppl t Maidens	*Agamem on*	
Th Pers ans	*Choephoroe*	
The Seven Ag n t Th bes	*Eumenides*	[illegible]
Pr m theus B u d		

Volume Number	*Author and Title*		*Author s Divis ons Cited*
5	SOPHOCLES (*c* 495 406 B C)		
	Oedipus the K ng	*Electra*	
	Oed pus at Colonus	*Trachiniae*	
	Antigone	*Philoctetes*	Line
	Ajax		
5	EURIPIDES (*c* 480–406 B C)		
	Rhesus	*Electra*	
	Medea	*The Bacchantes*	
	Hippolytus	*Hecuba*	
	Alcest s	*Heracles Mad*	
	Heracl idae	*The Phoenician Maidens*	
	Th Suppliants	*O estes*	
	The T ojan W men	*Iphigen a Among the Tauri*	
	Ion	*Iph genia at Aulis*	
	Helen	*The Cy l ps*	Line
	And omache		
5	ARISTO HANES (*c* 445–*c* 380 B C)		
	The A harnians	*The Frogs*	
	The Knights	*The Lysist ata*	
	The Cl uds	*The Thesmophor a usae*	
	The Wasps	*The Eccle ia usae*	
	Th P ace	*Th Plutus*	Line
	The B ds		
6	HERODOTUS (*c* 484–*c* 425 B C)		
	The H tory		BOOK
6	THUCYDIDES (*c* 460–*c* 400 B C.)		
	Peloponnesian War—*The History of the Peloponnesian War*		BOOK
7	PLATO (*c* 428–*c* 348 B C)		
	Charmides	*Phaedo*	
	Lysis	*Gorgias*	
	La hes	*The Republi*	
	Protago as	*Timaeus*	
	Euthydemus	*Crit as*	
	Cratylus	*Pa men des*	
	Pha drus	*Thea t tus*	
	Ion	*S ph st*	
	Symposium	*St te man*	
	Meno	*Ph lebus*	
	Euthyphro	*Laws*	
	Apology	*The Seventh Letter*	—except *Rep bl c*
	Crito		and *Laws* BOOK

Volume Number Author and Title	*Author s Divisions Cited*
8 ARISTOTLE (384 322 B C)	
Categories	CHAPTER Line
Interpretation——On Interpretation	
Prior Analytics	BOOK CHAPTER Line
Posterior Analytics	
Topics	
Sophistical Refutat ons——On Sophistical Refutations	CHAPTER Line
Physics	BOOK CHAPTER Line
Heavens——On the Heavens	
Generat on a d Corrupt on——On Generation and Corruption	
Meteorology	
Met physics	
Soul——On the Soul	
Sense and the Sensible——O Sense and the Sensible	CHAPTER Line
Memory a d Remi sce ce——On Mem ry and Reminiscence	
Sle p——On Sleep and Sl eple sness	
Dreams——On Dr ms	
P ophesy ng——On P oph sy g by Dre ms	
Lo gevity——O Longev ty and Sho tne s of L fe	
Youth Lif and B e th ng——On Youth and Old Age On Life and De th On B eathing	
9 ARISTOTLE	
History of An mals	BOOK CHAPT R, L ne
P rts of An m ls——On the P ts of Animals	
Motion of An m ls——On the M tion f A imals	CHAPTER Line
G t f An mals——On the G t of Animals	
Gener tion of An m l ——On the Generat on of Animals	BOOK CHAPT R Line
Eth cs——Nic m ch n Ethics	
Pol t cs	
The Athen Constitution	CHAPTER, par graph
Rhetoric	BOOK CHAPTER Line
Poet ——On Poetic	CHAPTER Line
10 HIP O R T S (*fl* 400 c)	
The O th	—
A cie t M dici e——O Ancient M dici e	parag ph
A r W aters Pl es——On Ai s W aters and Places	
Pr gn stics——The Book of Pro r t s	
Reg men i Acut D s ——On Regimen in Acute Diseases	parag ph APPENDIX
Ep dem cs——Of the Ep dem cs	BOOK SECTION para aph CAS
I ju of the He d——On I juries f the Head	paragr ph
S rgery——On the Su gery	
Fr ct e ——O F a tu e	
Art cul t s——O the A t culations	
I st um nt f Reductio	

Volume Number	*Author and Title*	*Author's Divisions Cited*
10	HIPPOCRATES (continued)	
	Aphorisms	SECTION: paragraph
	The Law	paragraph
	Ulcers—*On Ulcers*	paragraph
	Fistulae—*On Fistulae*	paragraph
	Hemorrhoids—*On Hemorrhoids*	paragraph
	Sacred Disease—*On the Sacred Disease*	—
10	GALEN (c 130–c 200 A D)	
	Natural Faculties—*On the Natural Faculties*	BOOK CHAPTER
11	EUCLID (fl c 300 B C)	
	Elements—*The Thirteen Books of Euclid's Elements*	BOOK DEFINITION POSTULATE COMMON NOTION PROPOSITION LEMMA
11	ARCHIMEDES (c 287–212 B C)	
	Sphere and Cylinder—*On the Sphere and Cylinder* Book I II	BOOK DEFINITION ASSUMPTION PROPOSITION COROLLARY LEMMA
	Measurement of a Circle	PROPOSITION
	Conoids and Spheroids—*On Conoids and Spheroids*	DEFINITION LEMMA PROPOSITION
	Spirals—*On Spirals*	PROPOSITION DEFINITION
	Equilibrium of Planes—*On the Equilibrium of Planes* Books I II	BOOK POSTULATE PROPOSITION
	The Sand Reckoner	—
	Quadrature of the Parabola	PROPOSITION DEFINITION
	Floating Bodies—*On Floating Bodies* Books I II	BOOK POSTULATE PROPOSITION
	Book of Lemmas	PROPOSITION
	Method—*The Method Treating of Mechanical Problems*	PROPOSITION
11	APOLLONIUS OF PERGA (c 262–c 200 B C)	
	Conics—*On Conic Sections*	BOOK DEFINITION PROPOSITION
11	NICOMACHUS OF GERASA (fl c 100 A D)	
	Arithmetic—*Introduction to Arithmetic*	BOOK
12	LUCRETIUS (c 98–c 55 B C)	
	Nature of Things—*On the Nature of Things*	BOOK Line
12	EPICTETUS (c 60–c 138 A D)	
	The Discourses	BOOK CHAPTER
12	AURELIUS (MARCUS AURELIUS) (121 180 A D)	
	The Meditations	BOOK SECTION
13	VIRGIL (70 19 B C)	
	The Eclogues	Number of Eclogue Line
	The Georgics	Number of Georgic Line
	The Aeneid	BOOK Line

Volume Number Author and Title — *Author's Divisions Cited*

14 PLUTARCH (c 46–c 120 A D)

[*The Lives of the Noble Grecians and Romans*]

Theseus
Romulus
Romulus Theseus——Romulus and Theseus Compared
Lycurgus
Numa Pompilius
Lycurgus Numa——Lycurgus and Numa Compared
Solon
Poplicola
Poplicola Solon——Poplicola and Solon Compared
Themistocles
Camillus
Pericles
Fabius
Fabius Pericles——Fabius and Pericles Compared
Alcibiades
Coriolanus
Alcibiades Coriolanus——Alcibiades and Coriolanus Compared
Timoleon
Aemilius Paulus
Aemilius Paulus Timoleon——Aemilius Paulus and Timoleon Compared
Pelopidas
Marcellus
Marcellus Pelopidas——Marcellus and Pelopidas Compared
Aristides
Marcus Cato
Aristides Marcus Cato——Aristides and Marcus Cato Compared
Philopoemen
Flamininus
Flamininus Philopoemen——Flamininus and Philopoemen Compared
Pyrrhus
Caius Marius
Lysander
Sulla
Lysander Sulla——Lysander and Sulla Compared
Cimon
Lucullus
Cimon Lucullus——Cimon and Lucullus Compared
Nicias
Crassus
Crassus Nicias——Crassus and Nicias Compared
Sertorius
Eumenes
Eumenes Sertorius——Eumenes and Sertorius Compared
Agesilaus
Pompey
Agesilaus Pompey——Agesilaus and Pompey Compared
Alexander
Caesar
Phocion
Cato the Younger
Agis
Cleomenes
Tiberius Gracchus
Caius Gracchus
Caius and Tiberius Gracchus Agis and Cleomenes——Caius and Tiberius Gracchus and Agis and Cleomenes Compared
Demosthenes
Cicero
Demosthenes Cicero——Demosthenes and Cicero Compared
Demetrius
Antony
Antony Demetrius——Antony and Demetrius Compared
Dion
Marcus Brutus
Brutus Dion——Brutus and Dion Compared
Aratus
Artaxerxes
Galba
Otho

Volume Number Autho and T tle		*Autho s D visions C ted*
15	TACITUS P CORNELIU (*c* 55-*c* 117 A D)	
	The A nals *The Histories*	BOOK
16	PTOLEMY (*c* 100-*c* 1 8 A D)	
	The Almagest	BOOK
16	CO ERNICUS NICOLAUS (1473 1543)	
	R volutions of the Heavenly Spheres——*On the Revolutions of the Heavenly Spheres*	BOOK
16	KE LER JOHANNES (1571 1630)	
	Epitome——*Epitome of Coper ican Ast onomy* IV and V	BOOK
	The Harmo ies of the Wo ld V	——
17	PLOTINUS (205-270)	
	First Sixth En ad——*The Six Enneads*	TRACTATE CHAPTER
18	AUGU TINE SAINT (354-430)	
	The Conf sions	BOOK para raph
	The City f God	BOOK PREFACE CHAPTER
	Chr stian Doctrine——*On Christian Doctrine*	PREFACE BOOK CHAPTER
19	AQUINAS S INT THOMAS (*c* 12 5 1274)	
	Th Summa Th ol gi a First Part Part I of the Second Part Questions 1 48	PROLOGUE PART QUESTION ARTICLE ANSWER CONTRARY REPLY
20	AQUINAS SAINT THO AS	
	The Summa Th ol g ca Part I of the Second Part (cont nued) Questions 49-114 Part II of the S cond Part Questions 1 46 179-189 Th rd Part Questions 1 26 60-65 Supplement to the Third Part Questions 69-99	PROLOGUE PART QUESTION ARTICLE ANSWER CONTRARY REPLY
21	DANTE ALIGH ERI (265 1321)	
	The D ine C m dy HELL PURGATORY PARADISE	Number of Canto Line
22	CHAUCER GEOFFREY (*c* 1340-1400)	
	Troil us and C s da	BOOK STANZA
	[*The Canterbu ry T l s*]	Line except prose parts (see b low)

The Prol gu
The Kn ght s Tale
Th M ller Prol gu e
The M ller s Tale
The Reeve s Prologue
The Reeve s Tal
Th Cook s Prol gue
The Cook s Tale
Introduct on to th M n of Law's Prologue
The Prologue of th Man of Law s Tale
The Tale of th Man of Law
The Wife of B th s Pr logue
The Tale of th W fe f Bath
Th F a s Pr l gue
The Fr ar s Tal
The Summoner s Pr logue
The Summoner s Tale
The Clerk s Prol g e
The Clerk s Tal
The Mer ha t s Prol gue
Th Merch nt s Tale
Epilogue to the Merchant s Tal

Volume Number	Author and Title		Author's Divisions Cited
22	CHAUCER GEOFFREY (continued)		
	[*The C nterbury Tales*]		
	The Squire s Tale	*The Tal. of Melibeus*	paragraph
	The Words of the Frankl n	*The Monk s Prologue*	
	The Frankl s Prologue	*The Monk s Tale*	
	The Frankl n s Tale	*The Prol g e of the Nun s Priest s Tale*	
	The Physician s Tale	*The Nun s Prie t s Tale*	
	Tl e Words f the Host	*Ep logue to the Nun s Priest s Tale*	
	The Prologue of the Pardoner s Tale	*The Second Nun s Prologue*	
	The P doner s Tale	*The Seco d Nun s Tale*	
	The Sh pman s Prologue	*The Canon s Yeoman s Prologue*	
	The Sh pman s Tale	*The Canon s Yeoman s Tale*	
	The Prioress s Prologue	*The Manciple s Prologue*	
	The Prior ss s Tale	*The Manciple s Tale*	
	Prologue to S r Thopas	*The Parson s Prologue*	
	S Tl opas	*The Par on s Tale*	paragraph
	Prolog e to Mel b us	*L Envoi*	—
23	MAC IAVELLI NICOLO (469–1527)		
	The Prince		CHAPTER
23	HOBB S THOMAS (1588 1679)		
	Le athan—Le athan or Matter Form and Power of a Con mon ealth Ecclesiastical and Civil		INTRODUCTION PART CONCLUSION
24	RABEL IS FRANÇOIS (c 1495– 553)		
	Gargantua and Pa tagru el		BOOK
25	MONTAIGNE MICHEL EYQUEM DE (1533 159)		
	Th Ess ys		—
26	SHAK PEARE WILLIAM (564 1616)		
	1st Henry VI—Th First Part f Ki g Henry the S xth	*Richard II—The Tragedy of King Richa d th Second*	
	2nd He ry VI—Th S cond Part of Ki g Henry th S xth	*A Midsummer Night s Dream*	
	3 d H nry VI—The Third Part of Ki g Henry the Sixth	*K g John—The Lif and Death of Ki g John*	
	Rich d III—The Trag dy of K g R h rd the Third	*The Merchant f Venice*	
	Th Com dy of Errors	*1st Henry IV—The First Part f King Henry tl e F urth*	
	Titus A d on cus	*2nd Henry IV—The Second P rt of Ki Henry th F urth*	
	Th Tami g of the Shr w	*M ich Ado About Noth ng*	
	Th Two Gentlemen of Verona	*Henry V—Th Life f K ng Henry the F fth*	
	Lo s Labour s Lost	*Jul us Cae ar*	
	Rom o d Juliet	*As You Like It*	ROLOGUE ACT SCEN E ILOGU Line

Volume Number	Author and Title	Author s Divisions Cited
15	TACITU P CORNELIUS (c 55–c 117 A D)	
	The Ann ls *The Histories*	BOOK
16	PTOLEMY (c 100–c 178 A D)	
	The Almagest	BOOK
16	COPERN CUS N COLAUS (1473 1543)	
	Revolutions of the Heavenly Spheres——*On the Revolutions of the Heavenly Spheres*	BOOK
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	The Harmonies of the World V	——
17	PLOTINUS (205–270)	
	First Sixth Ennead——*The Six Enneads*	TRACTATE CHAPTER
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	Christ an Doct ine——*On Christian Doctrine*	PREFACE BOOK CHAPTER
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20	AQUINAS SAINT THO IAS	
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21	DANT ALIGHIER (1265 1321)	
	The D vine Com dy H LL PURGATORY PARADISE	Number of Canto Line
22	CHAUC R GEOFF EY (c 1340–1400)	
	T o l us a d Cressida	BOOK STANZA
	[*The Canterbury Tales*]	Line except p ose parts (see b low)

The P olog e
The Kn ht s Tale
The Miller's Prologue
The Miller s Tale
The Reeve s Prologue
The Reeve s Tale
The Cook s Prologue
The Cook s Tale
Introduction to the Man of Law's Prologue
The Prologue of the Man of La v s Tale
The Tale of the Man of Law
The Wife of Ba h s P ologue
The Tale of the Wife of Bath
The Fri r s Prologue
The Friar s Tale
The Summoner s P ologue
The Summo er s Tale
The Clerk s Prologue
The Clerk s Tale
The Merchant s Prologue
The Mercha t s T le
Epilogue to the Merchant s Tal

Volume Number Author and Title	Author's Divisions Cited
32 MILTON, JOHN (1608-1674)	
[English Minor Poems]	Line, except *Sonnets* and *Psalms*
Christs Nativity——*On the Morning of Christs Nativity* and *The Hymn*	
A Paraphrase on Psalm 114	
Psalm 136	
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THE GREAT IDEAS II

Chapters 51–102. MAN *to* WORLD

Chapter 51 MAN

INTRODUCTION

WHETHER or not the proper study of mankind is man it is the only study in which the knower and the known are one in which the object of the science is the nature of the scientist If we consider every effort men have made in response to the ancient injunction know thyself then psychology has perhaps a longer tradition than any other science But by a stricter conception of science more is required than individual insight or self consciousness Definitions principles analyses applicable to all men must be established and it has been questioned whether the method of introspection suffices for this purpose What methods should be used by the psychologist depends in part upon the precise object and scope of his inquiry According as different subject matters and different methods define psychology there seem to be several disciplines bearing that name each with its own tradition in western thought

In one conception psychology begins with the dialogues of Plato and with Aristotle s treatise *On the Soul* As Aristotle s title indicates and as the Greek roots of the word psychology connote the soul rather than man is the object of the science Anthropology Kant later *suggests* would be a more appropriate name for the science of man The Greek inquiry into the soul extends beyond man to all living things. It is because the soul is in some sense the principle of animal life Aristotle writes that the knowledge of the soul admittedly contributes greatly to the advance of truth in general and above all *to our understanding* of Nature

Nevertheless psychology for the Greeks is principally concerned with the study of man The analysis of the parts or faculties of the human soul is an analysis of the properties of human nature—the powers which man has and the characteristically human acts or functions he can perform The methods by which this analysis is developed are for the most part the same methods which the Greek philosophers use in physics The study of the soul Aristotle writes falls within the science of Nature The definitions of the psychologist like those of the physicist give a certain mode of movement of such and such a body (or part or faculty of a body) by this or that cause and for this or that end In the case of the human soul however the psychologist can employ a method not applicable to other things The human intellect is able to examine itself Mind can thus know things about mind which are not otherwise observable

The subject matter of psychology narrows somewhat when at a later moment in the tradition the study of mind tends to replace the study of man This narrowing takes place gradually Though Descartes identifies soul with mind or intellect he treats of the passions and the will as well as thought and knowledge Differing from Descartes with regard to body and soul Hobbes and Spinoza also give as much attention to the emotions as to ideas and reasoning But with Locke Berkeley and Hume there is an increasing tendency to analyze the contents of consciousness and the acts of the understanding treated exclusively as a faculty of thinking or knowing Where in the earlier tradition the observation of human behavior and the behavior of other animals appears to be useful in psychology here the main source of psychological knowledge seems to be introspection

The *Principles of Psychology* by James and the writings of Freud represent a return to the broader conception of the science According to James it is better to let the science be as vague as its subject if by so doing we can throw any light on the main business in hand

boasts may be found in an incipient or even sometimes in a well developed condition in the lower animals They are also capable of some inherited improvement as we see in the domestic dog compared with the wolf or jackal If it could be proved that certain high mental powers such as the formation of general concepts self consciousness etc. were absolutely peculiar to man which seems extremely doubtful it is not improbable that these qualities are merely the incidental results of other highly advanced intellectual faculties and these again mainly the result of the continued use of a perfect language Such a view clearly takes the position that man varies from other animals in the same way that one species of animal varies from an other

Those who take the opposite position do not always agree on the precise nature of the difference in kind For the most part they attribute rationality to man alone and use the word brute to signify that all other animals totally lack reason no matter how acute their intelligence or the apparent sagacity of their instinctive reactions Milton for example in common with many others describes man as

a creature v ho not p one
And brute as oth r creatures but endued
With sanctity of reason might erect
His stature and up ight v ith front s ene
Gove n the rest self kn ı g a d f om thence
Magnanimous to co respond with heaven

Those who find a difference in kind between man and other animals also tend to think that human society and human language are essentially different from the beehive or the ant mound from bird calls jungle cries or parroting because they are the work or expression of reason Unlike Darwin some of them find in human speech not the cause of man s *apparent* difference in kind from other animals but the consequence of his *real* difference in kind—his distinctive rationality The fact that man does certain things that no other animal does at all means to them that man possesses certain powers which no other animal shares to any degree even the slightest They would therefore interp et Darwin s admission that an anthropoid ape could not fashion a stone into a tool or follow a train of metaphysical reasoning or solve a mathematical problem or reflect on God or admire a grand natural scene as an indication that the ape totally lacked human reason or intellect however acute his animal intelligence But the writers who agree that man is radically different from the brutes do not all agree in the account they give of human reason nor do they all affirm free will as the natural accompaniment of rationality

Locke for example begins his essay on *Human Understanding* with the remark that the understanding sets man above the rest of sensible beings Men and other animals alike have the powers of sense memory and imagination but he says brutes abstract not The power of abstracting is not at all in them This power of having general ideas is that which puts a perfect distinction betwixt man and brutes and is an excellency which the faculties of brutes do by no means attain to But Locke denies that man has free will in the sense of a free choice among alternatives Rousseau on the other hand declares that every animal has ideas and it is only in degree that man differs in this respect from the brute It is not therefore so much the understanding that constitutes the specific difference between the man and the brute as the human quality of free agency and it is particularly in his consciousness of this liberty that the spirituality of his soul is displayed

James agrees with Locke that it is probable that brutes neither attend to abstract characters nor have associations by similarity but it is the latter fact which James himself makes the principal distinction between man and brute We may he asserts consider it proven that the most elementary single difference between the human mind and that of brutes lies in this deficiency on the brute s part to associate ideas by similarity James enumerates other classical *differentiae* of man besides that of being the only reasoning animal Man has been called he says the laughing animal and the talking animal but these d stinctive traits like human reasoning James regards as consequences of his unrivalled powers to associate ideas by similarity

Reason and speech are for James the effects where for Adam Smith they are the cause of man s pecul arly human attributes 'The propensity to truck b rte and exchange one

thing for another Smith writes is common to all men and to be found in no other race of animals. This seems to him to be a necessary consequence of the faculties of reason and speech which are peculiar to man Hobbes as we shall see presently takes still another position since he explains man s reasoning power in terms of his faculty of speech a faculty which is possessed by no other animal

Despite all these variations in theory or explanation writers like Locke Rousseau James Smith and perhaps Hobbes seem to agree that man and brute differ in kind On that point they agree even with writers like Plato Aristotle Augustine Aquinas Descartes Spinoza Kant and Hegel who hold as they most definitely do not that man has a special faculty of mind reason or intellect The contradictory position is, therefore not to be found in the denial of some particular theory of reason but rather in the denial that any faculty or attribute which man possesses warrants our calling him rational and other animals brute

THE ISSUE is sharply drawn between these contradictory positions Yet it is avoided by those who go no further than to see in human civilization certain distinctive features such as the arts and sciences or law government and religion Mill for example discussing the sentiment of justice finds its root in the natural impulse to resent and to repel or retaliate any harm done or attempted against ourselves or against those with whom we sympathise common to all animal nature Man differs from other animals he writes first in being capable of sympathising not solely with their offspring or like some of the more noble animals with some superior animal who is kind to them but with all human and even with all sentient beings Secondly in having a more developed intelligence which gives a wider range to the whole of their sentiments whether self regarding or sympathetic By virtue of his superior intelligence even apart from his superior range of sympathy a human being is capable of apprehending a community of interest between himself and the human society of which he forms a part

A view of this sort would seem to leave open the question whether such typically human developments signify the possession by man of special powers which set him apart as *different in kind* While admitting extraordinary differences between the behavior or accomplishments of men and other animals this view does not reject the possibility that such accomplishments may represent merely wide differences in degree of power which give the *appearance* of differences in kind

As we have already observed the issue about man and brute cannot be separated from the controversy about the so-called higher faculties of man Except for the view that man is a purely spiritual being who merely inhabits or uses a physical body no theory of human nature doubts that man as a living organism possesses in common with plants and animals certain bodily powers or functions The vegetative functions which Galen calls the natural faculties are indispensable to human as to all other forms of corporeal life Similarly the powers of sensitivity and appetite or desire are obviously present in man as in other animals To the observer who sees only the externals of human and animal behavior men and the higher animals appear to react to the physical stimulation of their sense organs with a similar repertoire of bodily movements which vary only as their skeletal structure and their organs of locomotion differ They also manifest outward signs of inner emotional disturbance sufficiently similar to warrant treating emotions like fear and rage as common to men and other animals

On all this there seems to be little dispute in the tradition of the great books But difficult questions arise when the inner significance of these external movements is considered Both men and animals have the familiar sense organs and such powers as touch taste smell hearing and vision But do sensations give rise to knowledge in the same way for both men and animals? Do the powers of memory and imagination extend an animal s range of apprehension as they do man s? Do these powers affect the perception of present objects in the same way for men and animals?

Such questions are not readily answered by observation of external behavior alone What seems to be called for—a comparison of human and animal experience—cannot be obtained The difficulty of the problem becomes most in-

tense when a special faculty of knowledge or thought is attributed to man for animal and human sense perception, imagination or even emotion may be incommensurable if a special factor of understanding or reason enters into all human experience and is totally absent from that of animals

In the ancient and mediaeval periods the sensitive faculty including the interior sensitive powers of memory and imagination is generally distinguished from another faculty variously called intellect reason or mind Writers like Plato Aristotle Plotinus Lucretius Augustine and Aquinas have different conceptions of *intellect or mind in itself* and *in its relation* to sense and imagination but they do not question its existence as a separate faculty The range of the sensitive powers does not extend to ideas or intelligible objects nor is sensitive memory or imagination for them the same as rational thought

Not only does it seem unquestionable in the ancient and mediaeval tradition that man has these two distinct faculties of knowledge but it is generally assumed that other animals have to a greater or less degree the power of the senses alone Only men can understand as well as perceive only men can know the universal as well as the particular only men can think about objects which are neither sensible nor strictly imaginable—objects such as atoms and God the infinite and the eternal or the intellect itself The affirmation of an essential difference between reason and sense seems to be inseparable from the affirmation of an essential difference between men and brutes

DOUBTS OR DENIALS with regard to both affirmations achieve considerable prevalence in modern times But though the two affirmations appear inseparable they are not always denied together Montaigne for example does not so much doubt that men have reason as he does that other animals lack it He considers the matter in the light of external evidences in terms of the comparable performances of men and animals The light of reason seems to shine in both

He repeats many stories from Plutarch and Pliny which supposedly reveal the comparable mentality of animals and men One is the story of the hound who following the scent comes to a triple parting of the ways After sniffing along the first and second paths and discovering no trace of the scent the hound without a moment s hesitation or sniffing takes up the pursuit along the third trail This Montaigne suggests is a kind of syllogizing as if the dog reasoned thus with himself I have followed my master by foot to this place he must of necessity be gone by one of these three ways he is not gone this way nor that he must then infallibly be gone this other

It is noteworthy that Aquinas tells exactly the same story in order to make the point that *such appearances of reasoning in animals can be* explained as instinctively determined conduct In the works of irrational animals he writes we notice certain marks of sagacity in so far as they have a natural inclination to set about their actions in a most orderly manner through being ordained by the supreme art For which reason too certain animals are called prudent or sagacious and not because they reason or exercise any choice about things That such behavior is not the work of reason he claims is clear from the fact that all that share in one nature invariably act in the same way

Unlike Montaigne Machiavelli seems to imply that men and brutes are alike not in having reason, but in lacking it The passions control behavior Intelligence exhibits itself largely as craft or cunning in gaining ends set by the passions Man is no less the brute in essence because in the jungle of society he often succeeds by cunning rather than by force He may have more cunning than the fox but without armor he also has less strength than the lion The prince Machiavelli remarks being compelled knowingly to adopt the beast ought to choose the lion and the fox because the lion cannot defend himself against snares and the fox can not defend himself against wolves

For the most part however the modern dissent from the ancient and mediaeval view takes the form of denying that reason and sense are distinct powers In its most characteristic expression this denial is accompanied by a denial of abstract ideas as in the writings of Hobbes Berkeley and Hume Their position discussed more fully in the chapter on UNIVERSAL AND PARTICULAR is that men only give t

ance of having ab tract or general ideas because they employ common names which have gen eral significance

Language according to Hobbes is the root of all other differences between man and brute Sense and imagination are common to man and beast Rea oning or the train of thoughts can take place in any animal which has memory and imagination But that type of understand ing which Hobbes describes as conception caused by speech is peculiar to man His state ment that by the help of speech and method the same faculties which belong to both men and beasts may be improved to such a height as to distinguish men from all other living crea tures would seem to imply that Hobbes re gards man as superior to other animals only in degree Yet on the other hand he enumerates a variety of institutions peculiar to human life such as religion law and science which imply a difference in kind

Like Hobbes Berkeley thinks that men use general names but do not have general or abstract ideas But he seems much less willing than Hobbes to assert man s clear superiority even on the basis of man s attainments through the power of speech If the fact that brutes abstract not he says in reply to Locke be made the distinguishing property of that sort of ani mals I fear a great many of those that pass for men must be reckoned into their number

Hume goes further than either Berkeley or Hobbes Agreeing with them that man has no faculty above sense and imagination and hence no faculty which animals do not also possess he alon explicitly draws the conclusion which that implies

Animals as well as men he writes learn *many things from experience and infer that the* same events will always follow from the same causes Such inferences in animals or men are not founded on any process of argument or reasoning They are the result of the operation of custom and instinct Were this doubtful with regard to men it seems to admit of no question with regard to the brute creation and the conclusion being once firmly established in the one we have a strong presumption from all the rules of analogy that it ought to be univer sally admitted without any exception or re serve

But if custom and instinct underlie the appearance of rea oning in both men and animals it may be asked says Hume how it happens that men so much surpass animals in reasoning and one man so much surpasses another? His answer seems to be entirely in terms of degree of the same factors Th same sort of difference which obtains between a superior and an inferior intelligence among men obtains between men and other animals

All the evidence which Darwin later assem bles on the characteristics of human mentality is offered by him in proof of the same point But to those who think that man alone has an intel lect or a rational faculty over and above all his sensitive powers such evidence remains in on clusive As in the case of the dog whose behav ior Aquinas and Montaigne interpret different ly the same observed facts seem to be capable of quite opposite explanation by those who hold opposite theories of human and animal intelli gence

Is THERE INTERNAL evidence obtained from man s introspective experience of his own thought which can resolve the controversy? As Descartes sees it the interpretation of such evidence also seems to depend on the prior assumption one makes about the sameness or differen e of men and brutes

We cannot help at every moment experi encing within us that we think he writes nor can anyone infer from the fact that it has been shown that the animate brutes can discharge all these operations entirely without thought that he therefore does not think unless it be that having previously persuaded himself that his actions are entirely like those of the brutes just because he has ascribed thought to them he were to adhere so pertinaciously to these very words *men and brutes operate in the s m way* that when it was shown to him that the brutes did not think he preferred to divest himself of that thought of his of which he could not fail to have an inner consciousness rather than to alter his opinion that he acted in the same way as the brutes

On th other hand Descartes continues those who hold *that thought is not to be distinguished from bodily motion* will with much better rea son conclude that it is the same thing in us and

in them since they notice in them all corporeal movements as in us they will add *that a difference merely of greater and less makes no difference to the essence* and will infer that though per chance they think that there is less reason in the beasts than in us our minds are of exactly the same species

THE ISSUE concerning the senses and the rea son is more fully discussed in the chapters on MIND and SENSE and also in the chapters on IDEA and UNIVERSAL AND PARTICULAR where the problem of abstract ideas or universal no tions is considered The issue concerning soul in general and the human soul in particular be longs primarily to the chapter on SOUL and also to the chapter on MIND But like the issue about sense and intellect its bearing on the problem of man s nature deserves brief com ment here

The question is not whether man has a soul but whether only man has a soul a rational soul a soul which is in whole or in part imma terial a soul capable of separate existence from the body an immortal soul If soul is conceived as the principle of life in all living organisms—as Aristotle conceives it—then having a soul does not distinguish man from plants or ani mals If furthermore the rational soul is distinguished from the sensitive and vegeta tive soul in the same way that men are distin guished from brute animals and plants namely by reference to certain powers such as intel lect and will then the statement that men alone have rational souls would seem to add nothing to the statement that men alone are rational

But if the human soul through being ra tional confers a mode of immaterial or spirit ual being upon man then man s possession of such a soul sets him apart from all other physi cal things even further than the special power of reason separate him from the brutes The position of Lucretius illustrates this distinction in reverse He does not deny that man has a soul Unlike other living things which also have souls man s soul includes a special part which Lucretius calls mind He describes it as the part which we often call the understand ing in which dwells the directing and govern ing principle of life [and] is no less part of the man than hand and foot and eyes are parts of the whole living creature

So far as his having this special faculty is con cerned man is set apart But for Lucretius noth ing exists except atoms and void Consequently the nature of the mind and soul is bodily consisting of seeds exceedingly round and ex ceedingly minute in order to be stirred and set in motion by a small moving power In his physical constitution man does not differ in any fundamental respect from any other composite thing The materiality of his soul furthermore means that it is as perishable as any composite body

At the other extreme from Lucretius Des cartes conceives man as a union of two sub stances I possess a body he writes with which I am very intimately conjoined yet be cause on the one side I have a clear and dis tinct idea of myself inasmuch as I am only a thinking and unextended thing and as on the other I possess a distinct idea of body as it is only an extended and unthinking thing it is certain that this I (that is to say my soul by which I am what I am) is entirely and abso lutely distinct from my body and can exist without it Nevertheless sensations of pain hunger thirst etc lead Descartes to add I am not only lodged in my body as a pilot in a vessel but I am very closely united to it and so to speak so intermingled with it that I seem to compose with it one whole

Only man has a dual nature thus compound ed Other living things Descartes seems to hold are merely bodies having the structure and op eration of complex machines If like the *automata* or moving machines made by the in dustry of man there were such machines possessing the organs and outward form of a monkey or some other animal without reason we should not have any means of ascertain ing that they were not of the same nature as those animals

It is indifferent to Descartes whether other animals are conceived as automata or whether because they have life sensation and imagina tion they are granted souls I have neither denied to the brutes he writes what is vul garly called life nor a corporeal soul or organic sense What he has denied is thought and it is this one factor which makes it impossible for a

machine to imitate human speech and action It is this one factor which also requires man s soul unlike that of the brute to be an incorporeal substance

Unlike sensations and passions acts of thought and will according to Descartes cannot be functions of bodily organs Even though I were to grant he says that thought existed in dogs and apes it would in nowise follow that the human mind was not to be distinguished from the body but on the contrary rather that in other animals also there was a mind distinct from their body When Descartes affirms man s uniqueness he is therefore affirming more than that man alone has reason and free will He is affirming that of all things man alone is formed of body and soul —not a corporeal soul but a spiritual substance The angels in contrast are simply spirits

The remark of Plotinus that humanity is poised midway between the gods and the beasts applies with somewhat altered significance to the Cartesian view But there are other conceptions of the human constitution which though they preserve the sense of man s dual nature do not make him a union of two separate substances

Spinoza for example gives man special status in the order of nature by conferring on him alone participation in the divine mind The human mind he writes is a part of the infinite intellect of God The human body on the other hand is a mode which expresses in a certain and determinate manner the essence of God in so far as He is considered as the thing extended Man is thus composed of mind and body but for Spinoza this duality in human nature is a duality of aspects not a duality of substances

There is still another way in which a certain immateriality is attributed to man In Aristotle s theory the soul is not a substance in its own right but the substantial form of an organic body This is true of all kinds of souls—whether of plants animals or men But when Aristotle enumerates the various powers which living things possess—such as the nutritive the appetitive the sensory the locomotive and the power of thinking —he assigns to man alone or possibly another order like man or superior to him the power of thinking *i e* mind Furthermore of all the parts or powers of the soul thinking seems to Aristotle to afford the most probable exception to the rule that all the affections of soul involve body

Apart from thinking there seems to be no case he says in which the soul can act or be acted upon without involving body Whereas the sensitive powers are seated in bodily organs and cannot act except as bodily functions the intellect is immaterial It has no bodily organ which is comparable to the eye as the organ of vision and the brain as the organ of memory and imagination The act of understanding is not a function of physical matter

According to this theory man as a whole is a single substance composite of correlative principles of being—matter and form or body and soul But man differs from all other physical substances which are similarly composite in that he has a faculty and mode of activity separate from matter In the later development of this theory by Aquinas the immateriality of the intellect becomes the basis for arguing that the rational soul of man can exist apart from matter when the composite human substance is disintegrated by death

As indicated in the chapters on IMMORTALITY and SOUL, this is not the only argument for the immortality of the soul We are not here concerned however with the various arguments and their merits but only with the fact that certain conceptions of man s constitution attribute to man something more than the power of rationality namely the distinction of having a spiritual and immortal life

HIS FUTURE AND his past color the present life of man and alter the aspect under which he conceives his place in the general scheme of things Immortality promises release from mutability as well as salvation from death With an immortal soul man belongs to eternity as well as to time He is not merely a transient character in the universe His stature and his dignity are not the same when man regards himself as completely dissolvable into dust

The question of man s past or origin is perhaps even more critical in its bearing on man s present status Ancient poetry and history contain many myths of man s kinship with the gods The heroes trace their lineage back to the

gods. Through them or through the progenitors of the race man conceives himself as of divine descent or at least as having more affinity with the immortal gods than with all other earth bound things

In the *Descent of Man* Darwin paints a different picture of human origin Two propositions determine its general outlines The first already stated is that man belongs to the animal kingdom without any differentiation except in degree Not only in anatomy physiology and embryology are there marks of man s affinity with the mammals man s behavior and mentality also show according to Darwin that man possesses no attribute so peculiarly human that some trace of it cannot be found in the higher forms of animal life

The second proposition is that man s origin on earth has come about by a process of natural variation from an ancestral type exactly as other new species of plants or animals have originated by descent with variation from a common ancestor This theory of the origin of species is discussed in the chapter on EVOLUTION Its special application to the human species involves the notion of a common ancestor for both man and the anthropoid apes and the disappearance not only of the ancestral form but of the intermediate varieties—the so called missing links in the chain of variation

These two propositions are logically interdependent If the proposition is false that man differs from other animals only in degree the proposition cannot be true that man originated along with the anthropoid apes by descent from a common ancestor Conversely if the Darwinian theory of man s origin is true it cannot be true that men and brutes differ in kind But though the truth of each of these two propositions implies the truth of the other the problem of the difference between man and other animals has a certain logical priority over the problem of man s origin simply because more evidence is available to solve it That question calls for an examination of man as he is today in comparison with other extant species whereas the other question necessarily requires the collection and interpretation of historical evidence which may have some bearing on hypothetical missing links

It should be added that if in regard to the first question the evidence favored the affirmation of a difference in kind that would not entail the denial of biological evolution though it would necessarily challenge the Darwinian theory of how such evolution took place One alternative to the Darwinian hypothesis is the theory of emergent evolution according to which lower forms of life may give rise to new organic forms which are not only higher but are distinct in kind

Whether or not Christian theology and some theory of biological evolution can be reconciled there seems to be an inescapable contradiction between Darwin s view of man s origin and the Judaeo-Christian conception of man as a special creation special above all in the sense that God created man in his own image

As God is in essence a perfect intelligence and a spiritual being man according to Aquinas is said to be to the image of God by reason of his intellectual nature In all creatures there is some kind of likeness to God but it is only in man that that likeness is an image Man s finitude imperfection and corporeal existence make the image a remote resemblance yet according to the theologians it is precisely that likeness which separates man from all other earthly creatures and places him in the company of the angels

But man is no more an angel than he is a brute He is separated from the one by his body as from the other by his reason Nor does he in the present life have the spiritual existence of a disembodied and immortal soul To these three negatives in the definition of man—*not* an angel *not* a brute *not* a soul—the Christian theologian adds a fourth drawn from man s past Man is of the race begotten by Adam but he does not have the attributes which Adam possessed before the fall

The dogma of man s fall from grace is discussed in the chapter on SIN Here we are concerned only with its implications for the understanding of man s present nature as not only being deprived of the extraordinary gifts of life and knowledge which Adam lost through disobedience but as also being wounded in perpetuity by Adam s sin Weakness ignorance malice and concupiscence Aquinas declares are the four wounds inflicted on the whole of human nature as a result of our first parent s

sin Man in the world is not only disinherited from Adam s gifts but with the loss of grace he also suffers, according to Aquinas, a diminution in his natural inclination to virtue.

THERE ARE OTHER divisions in the realm of man but none so radical as that between Eden and the world thereafter As retold by Plato the ancient myths of a golden age when men lived under the immediate benevolence of the gods also imply a condition of mankind quite different from the observable reality but they do not imply a decline in human nature itself with the transition from the golden age to the present The modern distinction between man living in a state of nature and man living in civil society considers only the external circumstances of human life and does not divide man according to two conditions of his soul. Other dichotomies—such as that between prehistoric and historic man or between primitive and civilized man—are even less radical for they deal even more in gradations or degrees of the same external conditions.

These considerations lead us to another phase of man s thinking about man Where the previous problem was how man differs from every thing else in the universe here the question is how man is divided from man If men are not equal as individuals, to what extent are their individual differences the result of the unequal endowment of the natures with which they are born and to what extent are they the result of individual acquirement in the course of life?

The range of human differences whether innate or acquired may itself become the basis for a division of men into the normal and the abnormal a division which separates the feeble-minded and the insane from the competent and sane From a moral and political point of view this is perhaps the most fundamental of all classifications. It must be admitted however that traditionally the problem of the difference between men and women and the problem of the difference between the ages of man from the extreme of infancy to the extreme of senility seem to have exercised more influence on the determination of political status and moral responsibility

One other differentiation of man from man seems to have significance for the theory of human society and the history of civilization That is the division of men into groups, sometimes by reference to physical and mental traits which separate one race from another—whether these traits are supposed to be determined biologically as inheritable racial characteristics or are attributed to environmental influences sometimes by reference to the customs and ideals of a culture Both sets of criteria appear to be used in the traditional discussion of the opposition between Greek and barbarian Jew and gentile European and Asiatic.

THE ULTIMATE questions which man asks about himself are partly answered by the very fact of their being asked The answer may be that man is the measure of all things that he is sufficient unto himself or at least sufficient for the station he occupies and the part he plays in the structure of the universe The answer may be that man is not a god overlooking the rest of nature or even at home in the environment of time and space but rather that he is a finite and dependent creature aware of his insufficiency a lonely wanderer seeking something greater than himself and this whole world. Whatever answer is given man s asking what sort of thing he is, whence he comes, and whither he is destined symbolizes the two strains in human nature—man s knowledge and his ignorance man s greatness and his misery

Man writes Pascal is a nothing in comparison with the Infinite an All in comparison with the Nothing a mean between nothing and everything Since he is infinitely removed from comprehending the extremes the end of things and their beginning are hopelessly hidden from him in an impenetrable secret he is equally incapable of seeing the Nothing from which he was made and the Infinite in which he is swallowed up

Man Pascal goes on must not think that he is on a level either with the brutes or with the angels, nor must he be ignorant of both sides of his nature but he must know both. In recognizing both lies his wretchedness and grandeur Man knows that he is wretched He is therefore wretched because he is so but he is really greater because he knows it

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in 4 HOMER *Il ad* BK II [265 283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the passage is in section d of page 12

PAGE SECT ONS When the text is printed in one column the letters a and b refer to the upper and lo er halves of the page For example in 53 JAMES *Psychology* 116 119b the passage begins in the upper half of page 116 and ends in the lo r half of page 119 When the text is printed in two columns the letters a and b refer to the upper nd lo er halves of the left hand side of the page the letters c nd d to the upper and lower hal es of the right hand side of the pa e, For example in 7 PLATO *Symposium* 163b-164c, the passage be ins in the lo ver half of th left hand side of page 163 and ends in the upper half f the right hand side of page 164

AUTHOR S DIVISIONS One or more of the main divis ons of a work (such a P RT BK CH SECT) are som times included in the reference line numbers in brackets are given in cer t in cases *e g Il d* BK II [265 83] 12d

BIBLE REFERENCES The references are to book chapter and verse When the King James and Dou y versions d ffer n title of books r in the numbering of chapters or v rses the King James vers n is cit d first a d the Douay indic ted by a *(D)* follo s *e g* OLD TESTA M NT *N lem h* 7 45—*(D) II Esdras* 7 46

SYMBOLS The abbrev ation esp c lls the reader attention to one r mo e espec ally rele ant p rts of a h le reference pass m s gn fies that the topic is discussed intermit tently rather than continuously in the work or passage cited

For additional inform tion concern ng the style of the references see the Explanation of Referenc Style for general guidance n the use of *The G eat Id as* consult the Preface

1 Definit ons of m n concept ons of the p op ert es and qual t es of hum n n ture

OLD TESTAMENT *Genesis* 1 20-30 / *Psalms* 8 5-9

5 SOPHOCLES *A t gon* [332-375] 134a b [683 684] 137a

5 EURI I *S ppl ants* [195 213] 260a b

6 THU Y I *Pel ponn sian W a* BK I 368b-c BK IV 461d 462a BK V 506b

7 PLATO *Pl a d us* 116c d / *Sympos um* 157b 159b / *Go gia* 270d / *Republ* BK IX 425c 427b / *T ma us* 452 -454 466a-467d / *Cr t s* 485b-c / *Laws* BK I 649d 650b K IV 685a-c BK V 686d 687 BK VI 704a b BK V I 715b 723 d

8 AR TOTLE *Topi s* K V CH I [128^b15–16] 178b C 3 [132 1–9] 182d [32 17 22] 183 CH 4 [133 15 23] 184b [33^a8 33] 184 [133^b8–13] 184d CH 5 [134 8 7] 185b-c H 7 [3^b19–2] 188d BK V CH 3 [14 32 37] 193 / *H en* I CH 12 [29 b 11] 384a / *Met phy cs* BK I C [98 2 -98] 499a d / *S l* BK I I 3 [414^b –] 644d [4 5^a7– 1] 645b K III 3 [4 7^b7 4] 659d 660 [4 8^a10–24] 660 H 10 [433 8–13] 665d / *Mem ry a d Rem i cenc* C 2 [453 5 4] 695b

9 ARISTOTL *Histor of An m als* BK I CH I [488 6– 0] 9a [488 27] 9b [488^b 0–27] 9d CH II [49 3] 14b CH 16 [494^b 8] 17 BK I CH I [497^b3 498 4] 20b K III C I II [5 7^b27] 42b CH 19 [5 1 3] 45d CH 22 [5 3 4 15] 48c BK IV H 9 [536^b1 8] 63a b BK VIII CH [588 19–^{b}4] 114b d K IX CH I [608 10 ^{b}19] 1 3b d 134a / *Pa ts f A m als* BK I CH I [641^b5–8] 164b c BK I H 7 [653 9–^{b}2] 178 d CH 10 [656 4 13] 182a b CH 14 [658 15 7] 184d 185a [658 -8] 185b C I 6 [659^b 8]–CH 17 [66 ^{b}3] 186d 187 BK I CH I [66 ^{b}2] 190a C I 6 [669^a18–2] 197c [669^b4–5] 197d 198 CH 10 [673 4 1] 201d 202 [673 28] 202b K IV I 10 [686^a25 687^b5] 217d 219a [689^b1 12] 221 [69 28 30] 222b / *G t of A m l* CH 4 [7 6 9–25] 244d 245a C I 5 [706^b8 10] 245b / *Gener tio of A mals* K CH 0 [728^b14 21] 268d BK C I 6 [744 7 31] 285c [745^b16– 9] 286d K II CH 4 [7 b 8] 314b H 8 [776^b 3 27] 318d 319 K V CH [81 2] 323d 324a H 7 [786^b15 2] 328 d / *Eth s* K I H 7 [1 9 ^{b}7 1] 342d 343a [97^b23 1098^a7] 343 b -CH 13 [27 1103 3] 347d 348 BK III CH 2 [11 1^{b}6] 3 7b K VII CH 1 CH 3 [1 47^a25 ^{b}5] 397c d

(1 *Definitions of man conceptions of the properties and qualities of human nature*)

[1162 16–25] 414c BK IX CH 9 [1169^{b}17 19] 423b [1170 16–18] 423d 424a BK X CH 7 [1177^{b}26–1178 8] 432c CH 8 [1178^{b}23 7] 433c / *Politics* BK I CH 2 [1253 I 39] 446b d CH 5 [1254^{b}15–25] 448b BK VII CH 13 [1332 39–^{b}7] 537a b CH 15 [1334^{b}12 28] 539 d / *Rhetoric* BK I CH I [1355 I–3] 594d / *Poetics* CH 4 [1448^{b}4 24] 682c d

12 EPICTETUS *Discourses* BK I CH 3 108b c CH 9 114c 116b CH 23 128c d CH 28 134a d BK II CH 8 146a 147a CH 11 150a 151b BK IV CH 5 228c 229b CH 11 240d 242d

12 AURELIU *Meditations* BK II SECT I 256b d BK III SECT 4 260b 261a BK IV SECT 4 264a SECT 24 265c d SECT 29 266a BK V SECT 5 269b SECT 16 271c d BK VI SECT 23 276b BK VII SECT 13 280c SECT 55 283b c BK VIII SECT 2 286b c ECT 34 288a b BK X SECT I 291a c SECT 9 292b d SECT 23 293c BK X SECT 6 297a b BK XI SECT 8 303a b BK XII SECT 30 310a b

14 PLUTARCH *Pompey* 512c d

15 TACITU *Histories* BK II 219d BK IV 271b

17 PLOTINUS *First Ennead* TR I 1a 6b TR IV CH 14 18a c / *Third Ennead* TR III CH 4 94c 95c TR IV CH 2 97d 98a / *Sixth Ennead* TR VII C I 4–6 323c 325a

18 AUGUSTINE *Confessions* BK VIII par 12 113b d par 35 37 120b 121a / *City of God* BK V CH 11 216c d BK VII CH 23 256b-c BK XI CH 26–28 336d 338d / *Christian Doctrine* BK I CH 8 626c 627a

19 AQUINAS *Summa Theologica* PART I QQ 75–83 378a-440b

21 DANTE *Di ne Comedy* PARADISE VIII [91 148] 117d 118c

23 MACHIAVELLI *Prince* CH XVII 24a-c CH X III 25a 26a passim

23 HOBBES *Leviathan* INTRO 47a d P RT I 76c d 79b d 83a 84c 86b PART II 99a b 104d 138d 139a 141a b

24 RABELAI *Gargantua and Pantagruel* BK I 1a c 65c d

25 MONTAIGNE *Essays* 119b d 207a-c 215a 232c esp 216c 219a 231d 232c 381b-c 462d 463a

27 S KESPEARE *Hamlet* ACT II SC I [314 322] 43d ACT IV SC IV [31–66] 59a-c

28 H R EY *On A imal Generation* 454a

30 B CON *Advancement of Learn ng* 20c d

31 DESCARTES *Discourse* P RT IV 51b 54b passim / *Meditations* II 77d 81d

31 S INOZA *Ethics* P RT I AXIO I I 2 373c d PROP 10–13 376c 378c PART IV PROP 18 SCHOL 429a d PROP 35 433b 434a APPENDIX 447a-450d

32 MILTON *Paradise Lost* BK II [345 353] 118b 119a BK III [80–216] 137a 140a BK IV [288 369] 158b 160b BK VII [519–640] 228b 231a / *Samson Agonistes* [667–709] 354a 355a / *Areopagitica* 384a

33 PASCAL *Pensees* III 194a 115 194b 125 183 195b-204b 365 236a 396–424 240b-243b / *Vacuum* 357a 358a

35 LOCKE *Civil Government* CH VI SECT 67 39c d CH VII SECT 77 42b / *Human Understanding* BK II CH XXVII SECT 8 221a 222a BK III CH VI SECT 22 273d 274a SECT 33 278b-c CH X SECT 17 295d 296b C I XI SECT 20 304c d BK IV CH IV SECT 13 16 326d 328d CH VI SECT 16–18 344a-c CH XVI SECT 12 370c 371a CH XVII SECT I 371c d

36 S VIFT *Gulliver* PART IV 151b 152a 159b-160a

36 STERNE *Tristram Shandy* 383a 384a 394a

37 FIELDING *Tom Jones* 1b d 187d 188d 205a-c

38 MONTESQUIEU *Spirit of Laws* BK I 1d 2d BK XXIII 187d BK XXVI I 259b

38 ROUSSEAU *Inequality* 329a 348a c passim esp 329a 334a c 343a 345c

39 S ITH *Wealth of Nations* BK I 71b d BK II 147d 148a BK V 343a d

40 GIBBON *Decline and Fall* 409d 410a

42 K NT *Pure Reason* 199c 200c / *Fund Prin Metaphysic of Morals* 270c d 271d 273b 284b 285a / *Practical Reason* 316c 317a 348a b / *Pref Metaphysical Elements of Ethics* 372a b 373d / *Science of Right* 400b d-402a esp 401b-402a 421c-422d / *Judgement* 479 c 571c 572a 583b-c 584d 585c 587a 588a 591b 592d

43 DECLARATION OF INDEPENDENCE [7–9] 1a

43 FEDERALIST NUMBER 6 38d-41c pass m NUMBER 10 50b d NUMBER 15 65b-c NUMBER 17 69c NUMBER 27 95d NUMBER 34 110c d NUMBER 37 120d 121a NUMBER 49 160a NUMBER 51 163b c NUMBER 55 174c d NUMBER 57 177b c NUMBER 71 214b c NUMBER 76 226d 227b

43 M LL *Liberty* 273d 294a 297b esp 295a b / *Utilitarianism* 448d 449b 459c 464d

44 BOSWELL *Johnson* 377d 403a

46 HEGEL *Philosophy of Right* PART III par 190 66a b par 209 69d par 270 86d 87b [fn 1] ADDITIONS 34 122a b 121 136c d / *Philosophy of History* INTRO 178a 179d

47 GOETHE *Faust* PROLOGUE [280 292] 8a PART I [1110–1117] 27b 28a [3240–3250] 79b PART II [8082–8131] 197a 198a

48 MELVILLE *Moby Dick* 84b-85a 236a 239a 306a 313b 314a 343a 345b-347b

49 D RWIN *Descent of Man* 286a 287b 287d 291a 302b 310a 314a esp 310a d 312a b 319b-d 349d 597c

50 MARX *Capital* 98a 159a

50 MARX ENGELS *Communist Ma festo* 431b-c

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53 JAMES *Psychology* 49b 50 712b 737a pas sim esp 716a 717b 721a 730a 736b 737a 826a 827a

54 FREUD *Group Psychology* 684d 686c e p 686c / *War a d Death* 758a / *Civili ation and Its Discontents* 787a / *Ne v Introdu ctory Lectures* 883b c

1a The conception of man as essentially dis tinct or differing in kind from brute animals man s specific rational ty and freedom

OLD TESTAMENT *Genesis* 1:20-30 esp 1 26-30 5 1 2 9 6

APOCRYPHA *Ecclesiast cus* 17 1-9—(D) OT *Ecclesiasticus* 17 1-9

7 PLATO *Protagoras* 44a 45a / *Timaeus* 452d 453a

8 ARISTOTLE *Metaphys cs* BK I CH I [980ᵃ22 ᵇ27] 499a b / *So l* BK II CH 3 [414ᵇ17 20] 644d [415ᵃ7 12] 645b BK III CH 3 [427ᵇ7 14] 659d 660a [428 20-24] 660c CH 10 [433 8-13] 665d / *Memory and Reminiscence* CH 2 [453 5 14] 695b

9 ARISTOTLE *History of Animals* BK VIII CH I [588 8-ᵇ4] 114b d / *Pa ts of Animal* BK I C I I [641ᵇ5-8] 164b c K IV CH 10 [686 27 33] 217d 218a [687 4 10] 218 d / *Generation of Animals* BK II C 1 6 [744ᵃ27 31] 285c / *Eth cs* BK I CH 7 [1097ᵇ23 1098 7] 343a b CH 13 [1102 27 1103 3] 347d 348c BK II I 2 [1111ᵇ6-12] 357b c BK VII CH I [1145 15 33] 395 b H 3 [1147 25-ᵇ5] 397c d BK IX CH 9 [1170ᵃ 6-18] 423d 424a BK X CH 7 [1177 26-1 78ᵃ8] 432c CH 8 [1 78ᵇ23 27] 433c / *Pol t cs* BK I CH 2 [1253 39] 446b d CH 5 [1254ᵇ15 25] 448b BK V I CH 13 [1332 39-ᵇ7] 53 a b CH 15 [1334ᵇ12 28] 539 d

12 EPICTETUS *D scou ses* BK CH 3 108b c CH 6 110c 112b CH 9 114c 116b CH 16 1 1d 122d II 28 134a d BK II CH 8 146a 147a BK III CH 7 183c 184a BK IV CH I 213a 2 3d CH 5 228c 229b CH 7 233a b

12 AURELIUS *Med tat ons* BK II SECT 16 259a BK I I SECT 16 262d 263a c BK V S CT 16 271 d BK V SECT 23 276b BK VI I S CT 7 286a SECT 41 288d BK IX SE T 9 292b d

17 PLOTINUS *F st Ennead* TR I 1a 6b esp CH I 5a / *Third Ennead* TR III CH 4 94c 95 / *Sixth E nead* TR V I CH 4-6 323c 325a

18 AUGUSTINE *Co fess ons* BK XI I par z 113b-d par 35 3, 1 0b 1 1a / *C ty of God* BK V CH II 210c d BK VI CH 23 256b c BK VII CH 6 269 BK XI C I 26-28 336d 338d / *Chri t n Doctrine* BK I CH 8 626c 627a CH 22 629b 630a

19 AQUINAS *Summ The logica* PART I Q 3 A I REP 2 14b-15b Q 18 A 2 REP I 105c 106b A 3 ANS 106b 107c Q 19 A I AN 117d 118b Q 23 A I ANS a d RE 2 3 132c 133b Q 3 A 2 REP 3 168a 169b Q 59 A 3 ANS 308b 309a Q 72 A I REP I 3 4 368b 369d QQ 75 83 378a-440b Q 86 A 4 REP 3 463d-464d Q 91 A 3 REP I 3 486b-487d Q 92 A I NS 489d 489d Q 96 510a 513c esp A I 510b 511b A 4 512d 513c PART I II PROLOGUE 609a c Q I AA I 2 609b 611b Q 6 A 2 646a c Q II A 2 667b d Q 12 A 5 672a c Q 13 A 2 673c 674c Q 15 A 2 682a-c Q 17 A 2 687d 688b

20 AQUINAS *Summa Theologica* PART I II Q 50 A 3 REP 2 8b-9a Q 110 A 4 REP 3 350d 351d P RT III SUPPL, Q 70 A I ANS 951b 953b

21 DANTE *Di n. Comedy* HELL, XXVI [112 120] 39b XXXI [46-57] 46c PURG TORY XXV [34 78] 91d 92a PARADISE V [19 24] 112b VII [121 148] 116b-c

22 CHAUCER *Knight s Tale* [1303 1333] 181b 182a

25 MONTAIGNE *Essays* 184b c 215a 232c esp 216c 219a 231d 232c

7 SHAKESPEARE *Hamlet* ACT IV SC IV [32 39] 59a

31 DESCARTES *Discou se* PART I 41b d PART IV 1b-54b passim PART V 56a b 59a 60c / *Meditations* II 77d 81d esp 78b-c IV 89a 93a / *Object ons and Replies* 156a d 209b 226a d 276c

31 SPINOZA *Ethics* PART II AXIO I 2 373d PART III PROP 57 414d-415b P RT IV PROP 35 SCHO 433d 434a PROP 37 SCHOL I 2 434d 436a passim

32 MILTON *Parad se Lost* BK VII [449-549] 227a 229a BK VIII [369-451] 240a 242a BK IX [49-566] 259b BK XII [63 110] 320b 321b

33 PASCAL *Pensées* 140 199a b 339-348 233a 234 4 8 243a

35 LOCKE *Ci l Government* CH VI SECT 56-63 36d 38c CH XIV SECT 163 164 63a-c / *H man Understand ng* BK I CH XI SECT 10-11 145d 146a CH XXVII SECT 8 221a 222a SECT 12 223a b BK III CH VI SECT 26-27 274d 276a CH X SECT 17 295d 296b CH XI SECT 20 304c d

38 MONTESQUIEU *Spirit of Laws* BK I 1d 2b

38 ROUSSEAU *Inequality* 337d 338c 357c 358b / *Soci l Contract* BK I 393b c

39 SMITH *Wealth of Nations* BK I 6d 7b 8a b

42 KANT *Pure Reason* 164a 165c / *F nd P n M taphysic of M als* 264d 265a 279b d 281 282c / *Pract cal Reason* 291a 293b 316c 317a / *Pref Metaphysical Elements of Eth cs* 378b c / *Science of Right* 400b d 402a esp 401b 402a 420d 421a / *Judgeme t* 584d 585c

43 MILL *Liberty* 294a 297b

46 HEGEL *Phil ophy of R ght* INTRO par 21 17a c PART I par 47 24a b P RT I pa 132 46b-47a par 139 48d 49b ADDITION 4 116a d 117d 118a 22 120 d 28 121b 62 126a / *Philos phy of H story* IN RO 156c 168b d 178a b 186a PART I 257d 258a PART III 304d 305a

49 DARWIN *Descent f Man* 8 b c 319b-d 331b 332a

(1 *Definitions of man conceptions of the proper ties and qualities of human nature 1a The conception of man as essentially distinct or differing in kind from brute animals man s specific rationality and freedom*)

51 TOLSTOY *War and Peace* EPILOGUE II 689c 690a
52 DOSTOEVSKY *Brothers Karama ov* BK V 127b 137c passim

1b The conception of man as distinguished from brutes by such powers or proper ties as abstraction or relational thought language and law art and science

OLD TESTAMENT *Genesis* 2 19-20
5 AESCHYLUS *Prometheus Bound* [442-506] 44c 45a
5 EURIPIDES *Suppliants* [19 213] 260a b / *Trojan Women* [665-672] 275d
7 PL TO *Laches* 35b d / *Protagoras* 44a 45a / *Theaetetus* 534d 536a esp 535d 536a / *Laws* BK I 653a c
8 AR STOTLE *Topics* BK V CH 1 [128b15 16] 178b CH 3 [132 1-9] 182d [1, 17 2] 183a CH 4 [133 15 23] 184b CH 5 [134 8 17] 185b / *Heavens* BK II CH 12 [292b1 11] 384a / *Metaphysics* BK I CH 1 [980b25-981a27] 499b d / *Soul* BK III CH 3 [427b7 14] 659d 660a [428 20-24] 660 / *Memory and Reminiscence* CH 2 [453 5 14] 695b
9 ARISTOTLE *History of Animals* BK I CH I [488 20-27] 9d BK IV CH 9 [536b1-8] 63a b BK VI I CH I [588 18 b4] 114b d BK IX CH I [608 a-b 9] 133b d 134a / *Parts of Animals* BK II CH 10 [656 8-9] 182a CH 16 [659 28] CH 17 [660 3] 186d 187c BK III CH 6 [669 18-20] 197c CH 10 [673 4 10] 201d 202a BK IV CH 10 [686 25-687b5] 217d 219a esp [686 24] 218b [687a4 23] 218c d / *Generation of Ani mals* BK II CH 6 [744 27-31] 285 BK V CH 2 [781b17 23] 323d 324a CH 7 [786b15 2] 328c d / *Ethics* BK I CH 7 [1097 7 11] 342d 343a BK III CH 2 [1111b6-12] 357b c K VII CH 1 [1 45 15 3,] 395a b CH 3 [1147a2, b5] 397c d BK VIII CH 12 [1162 16- 5] 414c BK IX CH 9 [1169b17 19] 423b / *Politics* BK I CH 2 [1 53 1 39] 44 b d BK VII CH 13 [1332 39-b7] 537a b / *Rhetoric* BK I CH I [1355b1 3] 594d / *Poetics* CH 4 [1448b4 24] 682c d
12 EPICTETUS *D scou ses* BK I CH 3 108b-c CH 28 134a d BK IV CH 11 240d 242d
12 AURELIUS *Meditations* BK III SECT 16 262d 263a c BK IX SECT 9 292b d
23 MACHIAVELLI *Prince* CH XVIII 25a
23 HOBBES *Leviathan* PART I 52b 53a b 54a 54c 57d 59b-c 63a 79b-d PART II 100a-c
25 MONTAIGNE *Essays* 215b-216b 218a c
28 HARVEY *On Animal Generation* 427d-428a
30 BACON *Ad ancement of Learning* 20c d / *Novum Organum* BK II APH 35 163d 164a
31 DESCARTES *Discourse* PART V 59c 60b / *Objections and Replies* 226a d
32 MILTON *Paradise Lost* BK VIII [369-451] 240a 242a BK IX [549-566] 259b
35 LOCKE *Human Under tanding* INTRO SECT 1 93a b BK II CH XI SECT 4 11 144d 146a esp SECT 10 145d BK III CH I SECT 1 3 251b d 252a CH VI SECT 33 278b c BK IV CH XII SECT 11 361c d CH XVIII SECT 11 384b
35 BERKELEY *Human Knowledge* INTRO SECT 11 407b 408a
35 HU IE *Human Understanding* SECT I DIV 4 452b c
38 ROUSSEAU *Inequality* 341d 349d 350a
39 S ITH *Wealth of Na ions* BK I 6d 8b
42 KANT *Pure Reason* 164a 165c 199c 200c / *Practical Reason* 316c 317a / *Pref Metaphysi cal Elements of Ethi s* 372a b / *Intro Meta phys of Morals* 386b d / *Judgement* 479a c 602b d [fn 1]
43 MILL *Utilitarianism* 448a-449c
46 HEGEL *Philosophy of Righ* PART III par 211 70a c ADDITIONS 26 121a b 121 136c d 157 142b-c / *Philosophy of History* INTRO 168b d
49 DARWIN *Descent of Man* 278a 279a 294c 304a esp 294c d 297a 298a 304a 311d 320a b 349d 591d 593c
50 MARX *Capital* 85b c 86b c
52 DOSTOEV KY *Brothers Karama ov* BK V 122d 123a BK VI 167c d
53 JA IE *Psychology* 85a b 677a 678b 686b esp 678b 683b-684a 686a b 691a b 704a 706b esp 706b 873a
54 FREUD *Interpretation of Dreams* 385b c / *Unconscious* 429c d / *General Introduction* 616b c / *Civili ation and Its Disco tents* 778a

1c The conception of man as an animal differ ing only in degree of intelligence and of other qual ties possessed by other ani mals

20 AQUINAS *Summa Theologica* PART III SUPPL Q 79 A 1 ANS 951b-953b
23 HOBBES *Leviathan* PART I 52b 53a b 53d 54a 59b 64a c 79c PART II 112d 113a PART IV 267b
25 MONTAIGNE *Essays* 207a c 215a 232c esp 215c 219a 231d 232c
30 BACON *Novum Organum* BK II APH 35 163d 164a
32 MILTON *Parad se Lost* BK IX [549-566] 259b
35 LOCKE *Human Understand ng* BK III CH VI SECT 12 271d 272b CH X SECT 17 295d 296b CH XI SECT 20 304c d BK IV CH XVI SECT 12 370c 371a
35 HUME *Human Understanding* SECT IX 487b-488c
38 ROUSSEAU *Inequality* 334b d 338d 348d 349c
42 KANT *Pure Reason* 199c 200c
43 MILL *Utilitarianism* 448a-449c 469b-d

2 Man s knowledge of man

2a Immed ate self consciousness man s inti mate or introspective knowledge of him self

2b The sciences of human nature anthropol ogy and psychology rational and em pirical psychology experimental and clinical psychology

2b(1) The subject matter and scope of the science of man

(2b *The sciences of human nature anthropology and psychology rational and empirical psychology experimental and clinical psychology*)

2b(2) The methods and validity of psychology

8 ARISTOTLE *Soul* BK I CH I 631a 632d BK II CH 4 [415 14 22] 645b c
9 ARISTOTLE *Ethics* BK I CH 13 [1102 5 25] 34 b-c
19 AQUINAS *Summa Theologica* PART I Q 87 464d 468d
21 DANTE *Divine Comedy* PURGATORY XVIII [49-69] 80b-c
23 HOBBES *Leviathan* INTRO 47b d PART II 163a
30 BACON *Advancement of Learning* 49d 50b 54b c
35 BERKELEY *Human Knowledge* SECT 145 441d 442a SECT 148 442b d
35 HUME *Human Understanding* SECT I DIV 8 454a c SECT IX DIV 82 487b c
42 KANT *Pure Reason* 55a 56c 121a 123b 126c d / *Practical Reason* 292d [fn 1] 294a b 307d 310c / *Judgement* 599d 600d
43 FEDERALIST NUMBER 79 234b c
52 DOSTOEVSKY *Brothers Karamazov* BK XII 386 387d
53 JAMES *Psychology* 17b 18b 56a 66 passim 1 1a 129b esp 126a 129b 146a 165a 235b 236a esp 236b [fn 1] 259a b 822b 825a [fn 1]
54 FREUD *Origin and Development of Psycho Analysis* 13c 14a / *Unconscious* 429b c 434c / *General Introduction* 451d-452a 548a 550c esp 550a b 606a b / *Beyond the Pleasure Principle* 639a b 661c 662b / *Ego and Id* 706d 707a

2b(3) The relation of psychology to physiology the study of organic factors in human behavior

7 PLATO *Phaedo* 240d 242b / *Timaeus* 474b 475d
8 ARISTOTLE *Physics* BK VII CH 3 [246b20-248 8] 330a-d / *Soul* BK I CH I [403 2 b19] 632a d BK II CH I 642a 643a CH 9 [421b22 26] 653b BK III CH 4 [429a28-b4] 661c d CH 9 [432b26-433 1) 665c / *Sleep* 696a 701d esp CH I 696a 697c / *Dreams* 702a 706d passim esp CH 2 703a 704d
9 ARISTOTLE *Parts of Animals* BK II CH 4 175b 176a CH 7 [653b1-7] 178d 179a BK III CH 6 [669 18 20] 197c BK IV CH 10 [686b22 29] 218b-c / *Motion of Animals* CH 7 [701b13]-CH 8 [702a22] 237a c CH 11 239a d
10 HIPPOCRATES *Sacred Disease* 155d 160d esp 159a-c
12 LUCRETIUS *Nature of Things* BK III [94-829] 31b-40c
19 AQUINAS *Summa Theologica* PART I Q 75 A 3 REP 3 380c 381b A 4 381b 382a Q 76 A 5 394c 396a Q 84 AA 7-8 449b-451b Q 85 A 7 459c-460b PART I II Q 41 A I ANS 798b-d
28 HARVEY *Motion of the Heart* 271a b 296d / *Circulation of the Blood* 321d 322a 322c d / *On Animal Generation* 431d 432a
30 BACON *Advancement of Learning* 48d 50b
31 DESCARTES *Discourse* PART V 60b c PART VI 61c / *Meditations* VI 99d / *Objections and Replies* 207d 208a 209c
31 SPINOZA *Ethics* PART II PROP 14 380c PROP 16 17 380d 381d PROP 26 DEMONST 384a b PART V PREF 451a 452c PROP 39 462a c
38 ROUSSEAU *Inequality* 338a
42 KANT *Judgement* 538d 539a
51 TOLSTOY *War and Peace* EPILOGUE II 689c-690a
53 JAMES *Psychology* 2b 4a 7a 9a 56a esp 9a b 52a 53b 66b 71a passim 690b
54 FREUD *Interpretation of Dreams* 154c 155a / *Unconscious* 429a b 431c d / *General Introduction* 451d 452a 605b 606b / *Inhibitions Symptoms and Anxiety* 721a / *New Introductory Lectures* 872c d

2b(4) The place of psychology in the order of sciences the study of man as prerequisite for other studies

7 PLATO *Charmides* 7b c 8b d / *Phaedrus* 116c d / *Phaedo* 240d 242b / *Republic* BK II 316a b BK IV 350a b / *Philebus* 629b c
8 ARISTOTLE *Metaphysics* BK VI CH I [1026a 5-6] 548a
9 ARISTOTLE *Ethics* BK I CH 13 [1102 5-25] 347b-c / *Rhetoric* BK I CH 2 [1356a21 29] 595d
23 HOBBES *Leviathan* INTRO 47b d
25 MONTAIGNE *Essays* 69d 0c 259a 260b 308c d
28 HARVEY *On Animal Generation* 443b
31 DESCARTES *Discourse* PART IV 51c 52a / *Meditations* II 77d 81d / *Objections and Replies* 207b
33 PASCAL *Pensées* 66 180b 144 146 200b
35 LOCKE *Human Understanding* 87d INTRO 93a 9 d
35 HUME *Human Understanding* SECT I DIV 7-8 453 -454c
38 ROUSSEAU *Inequality* 3 9a 340b
42 KANT *Pure Reason* 1a 4a c esp 1b-d / *Practical Reason* 307d 310 331a 332d / *Judgement* 511a 512a 599d 600d
46 HEGEL *Philosophy of Right* INTRO par 4 1 d 13a par 19 16d 1 a
54 FREUD *New Introductory Lectures* 868b-d 874a c 883c d

3 The constitution of man

3a Man as a unity or conjunction of matter and spirit body and soul extension and thought

OLD TESTAMENT *Genesis* 2 7
APOCRYPHA *Wisdom of Solomon* 9 14 15 15 11 —(D) OT *Book of Wisdom* 9 14 15 15 11
NEW TESTAMENT *Romans* 7 14 23 8 4 13 / *I Corinthians* 15 36-49

7 PLATO *Cratylus* 93b d / *Phaedrus* 124b d / *Phaedo* 231b 234c / *Republic* BK III 338a 339a / *Timaeus* 453b c / *Laws* BK V 686d 687c

8 ARISTOTLE *Metaphysics* BK VII CH 10 [1035^b13 32] 559a b BK VIII CH 3 [1043^a29 ^{b}4] 567d CH 6 569d 570d BK XII CH 10 [1075^b34 37] 606d / *Soul* BK I CH I [403^a2 ^{b}19] 632a d CH 5 [410^b10–16] 640c [411^b5 18] 641 d BK II CH I 2 642a 644c

9 ARISTOTLE *Politics* BK I CH 5 [1254^a33 ^{b}7] 448a

12 LUCRETIUS *Nature of Things* BK III [94 176] 31b-32b [370 395] 34d 35a

12 EPICTETUS *Discourses* BK I CH 3 108b-c BK IV CH II 240d 241b

12 AURELIUS *Meditations* BK IV SECT 21 265b c BK VII SECT 55 283b-c BK IX SECT 8 292b BK X SECT 30 310a b

14 PLUTARCH *Romulus* 29a b

17 PLOTINUS *First Ennead* TR I 1 6b / *Second Ennead* TR I CH 5 37c / *Fourth Ennead* TR II CH 19–23 151d 154b esp CH 20 152b 153a TR VII CH I 191c d CH 8 197c 198b / *Sixth Ennead* TR VII CH 4–6 323c 325a

18 AUGUSTINE *City of God* BK V CH II 216c BK IX CH 8 17 289d 295c passim BK X CH 29 316d 318b BK XIII CH 16 367a d CH 19 369 370c BK XIV CH 2 3 377a 378d CH 5 379c 380b

19 AQUINAS *Summa Theologica* PART I Q 8 A I REP 34d 35c A 2 REP 2 35 36b QQ 75–76 378a 399b Q 118 A ANS and REP 2 601c 603b A 3 ANS 603b 604b Q 119 A I ANS 604c 607b PART I–II Q 4, A 5 REP 2 632c 634b Q 17 A 4 ANS and REP 3 688d 689c

20 AQUINAS *Summa Theologica* PART III, Q 2 A I ANS and REP 2 710a 711c A 5 715a 716b Q 17 A 2 REP 4 808d 809d PART III SUPPL, Q 79 A I–Q 8 A 2 951b 958b

21 DANTE *Divine Comedy* PURGATORY XXV [34 78] 91d 92

25 MONTAIGNE *Essays* 311a b 432b d 538a 543 c

30 BACON *Advancement of Learning* 48d 49c

31 DESCARTES *Discourse* PART IV 51d 52 PART V 60b c / *Meditations* II 77d 81d V 98 99 99d 100a / *Objections and Replies* 119d 120a DEF VI 130c d DEF X 130d PROP IV 133 135d 136b 152b d 156a 170b-c 207d 208a 209c 224d 225d 231a 232d 248b 276b

31 SPINOZA *Ethics* PART I PROP 13 376c 378c PART II PROP 2 396c 398b PART V PREF 451a 452

33 PASCAL *P* 512 262

35 LOCKE *Human Understanding* BK I CH III SECT 4 113b BK II CH XXVII SECT 6–8 220c 222 esp SECT 8 221d 222a SECT 15 224b-c SECT 21 225d 226 SECT 27 29 227d 228c BK IV CH II SECT 6 313 315b passim

35 HUME *Human Understanding* SECT VI DIV 52 472c-473c

36 STERNE *Tristram Shandy* 229b 230a 270b 277a b

37 FIELDING *Tom Jones* 198a-c

42 KANT *Judgement* 557c 558b

46 HEGEL *Philosophy of Right* PART I par 47 48 24a-c ADDITIONS 2 115d

53 JAMES *Psychology* 1a-4a esp 2b 3a 4a 84a 93b esp 88a 90b 116a 119b 130a 139a 140a 208a b 221a 226a esp 221a 222b 225b 226a

54 FREUD *Interpretation of Dreams* 154c 155a

3a(1) Man as a pure spirit a soul or mind using a body

7 PLATO *Cratylus* 93b d / *Phaedrus* 124b 126c / *Meno* 179d 180b / *Phaedo* 231b-234c 250a d / *Timaeus* 452d-454a

12 EPICTETUS *Discourses* BK I CH II 240d 241a

13 VIRGIL *Aeneid* BK VI [724–751] 230b 231a

17 PLOTINUS *First Ennead* TR I 1a 6b esp CH 5 7 2d-4a / *Second Ennead* TR I CH 5 37c / *Third Ennead* TR IV CH 2 97d 98a / *Fourth Ennead* TR VII CH I 191c d / *Sixth Ennead* TR VII CH 4 6 323c 325a

18 AUGUSTINE *City of God* BK XIII CH 16 367a d CH 19 369 370c

19 AQUINAS *Summa Theologica* PART I Q 29 A I REP 5 162a 163b Q 75 A 4 381b 382a Q 76 A I ANS 385d 388c A 4 ANS 393 394c A 7 ANS 396d 397d Q 118 A 3 ANS 603b 604b

20 AQUINAS *Summa Theologica* PART III SUPPL Q 79 A I ANS and REP 4 951b 953b

31 DESCARTES *Discourse* PART V 51c 52a PART V 60b / *Meditations* II 77d 81d V 98c d / *Objections and Replies* 119d 120a DEF VI–VII 130c d DEF X 130d PROP V 133c 135d 136b 152d 155 156 207d 208a

31 SPINOZA *Ethics* PART III PROP 2 396c 398b PART V PREF 451a 452c

35 LOCKE *Human Understanding* BK II CH XXVII SECT 6–8 220c 222a esp SECT 8 221d 222 SECT 21 225d 226a SECT 28–29 228a-c

35 BERKELEY *Human Knowledge* SECT 2 413b SECT 89 430b-c SECT 135 142 440a 441c SECT 148 442b d

40 GIBBON *Decline and Fall* 186a b

46 HEGEL *Philosophy of Right* PART I par 35 21a b par 47 24a b ADDITIONS 5 116d 117a 22 120 d 25 121a 8 121b / *Philosophy of History* PART I 310d

48 MELVILLE *Moby Dick* 28 380b 381a

51 TOLSTOY *War and Peace* BK VII 295b-c

53 JAMES *Psychology* 220b 226a

3a(2) Man's spirituality as limited to his immaterial powers or functions such as reason and will

8 ARISTOTLE *Soul* BK CH 4 [408^b18 9] 638 CH 5 [4 ^{b}13 18] 641c d BK C 2 [4 3^b24–29] 643d 644a BK II CH 4–5 661b 662d

19 AQUINAS *Summa Theologica* PART I Q 7 A 2 REP 2 31d 32c Q 29 A I REP 5 162 163b Q 75 A 2 379c 380c AA 5–6 382 384c Q 76

(3a *Man as a un ty or conjunction of matter and spirit body and soul extens on and thought 3a(2) Man s spi tual ty as limited to his immaterial pou ers or functions such as reason and will*)

385c 399b passim Q 77 A 5 403d-404c Q 78 A 1 ANS 407b 409 Q 79 413d-427a Q 80 A 2 428a d QQ 82-83 431d 440b Q 84 A 1 ANS and REP 1 440d 442a A 2 ANS 442b-443c A 6 ANS 447c 449a Q 85 A 1 ANS 451c 453c Q 86 A 1 REP 3 461c 462a Q 87 A 1 REP 3 465 466c Q 91 A 1 ANS and REP 1 484a 485b Q 96 A 2 511b d Q 98 A 1 ANS 516d 517c Q 118 A 2 ANS 601 603b

3b Comparisons of man with God or the gods or with angels or spiritual substances

OLD TESTAMENT *Genesis* 1 26-27 5 1 2; 9 6 / *Job* 4 16-21 / *Psalms* 8 5—(D) *Psalms* 8 6

APOCRYPHA *Wisdom of Solomon* 2 23—(D) OT *Book of Wi dom* 2 23

N W TESTAMENT *Matthew* 22 23 30 / *I Corin thians* 1 7 / *Hebrews* 2 7 / *James* 3 9 / *II Peter* 1 3 4 / *Revelat on* 22 8-9—(D) *Apoc alypse* 22 8-9

7 PLATO *P otagoras* 44a 45a / *Republic* BK VI 382 / *Tima us* 476a b

9 ARISTOTLE *Pa ts of A imals* BK IV CH 10 [686 27 33] 217d 218a

10 HI POCRATES *Sacred Disease* 155 d

12 E ICT TUS *Discou ses* BK I H 3 108b c CH 12 119b 120a CH 14 120d 121c BK II CH 16 158b d

18 AUGUSTIN *Confess ons* K VI par 4 36a b BK XII par 0 103c d K X II par 32 119a b / *City of God* K VIII CH 25 283b-c BK IX CH 8 17 289d 295c BK XII CH 21 357a b CH 23 357d 358a K XIII CH 1 360a b BK XV CH 6 426c 427a / *Christ an Doctrine* BK I CH 22 629b- CI 23 630a c H 3 632c 633b CH 33 633d 634b

19 AQUINAS *Summa Th olog ca* PART I Q 7 A 2 R P 2 31d 32c Q 30 A 2 R P 3 168a 169b Q 47 A 2 ANS 257b 258 QQ 50-64 269a 338d pass m Q 75 A 7 384d 38 c Q 93 492 501c Q 96 A 2 511b d QQ 106-107 545c 552b passim Q 108 A 1 ANS 52c 553 A 8 561a 562a Q 112 A 1 REP 4 571d 573a Q 117 A 2 R P 3 597c 598c A 3 ANS 598c 599b Q 118 A 3 ANS 603b-604b PART I II Q 4 A 5 REP 6 632c 634b

20 AQUINAS *Summa Theolog ca* PART I I Q 50 A 6 11a 12a PART II Q 6 A 3 RE 2 742a 743a

21 D NTE *D ri e Comedy* PAR D SE VII [121 148] 116b-c XXIX [13 84] 150b 151a

23 HO BES *Lev athan* PART II 162c PART III 183d 184a

27 SH KESPEARE *Hamlet* ACT II SC II [314 324] 43d

32 MILTON *Paradise Lost* BK II [345 353] 118b-119a BK IV [358-393] 160a 161a BK V [388 450] 183b 185a [469-505] 185b 186a BK VI [320 353] 203a 204a BK X [888-908] 293b 294a

33 PASCAL *Pensées* 140 199a b 418 243a

35 LOCK *Human Understanding* BK II CH X SECT 9 143a c CH XXIII SECT 13 207d 208b BK IV CH III SECT 17 317c SECT 23 320 c

35 BERKELEY *Human Knowledge* SECT 81 428c d

36 STERNE *Tri tram Shandy* 394a

42 KANT *Pure Reason* 33a d / *Practical Reason* 350c 351b

47 GOETH *Faust* PART I [482 517] 14a b [602 736] 16b 19b passim PART II [8094 8097] 197a

51 TOLSTOY *War and Peace* BK VII 295b c

53 JAMES *P ychology* 745a

3c Man as an organization of matter or as a collocation of atoms

7 PLATO *Sophist* 567a 568a / *Laws* BK X 761b

8 AR STOTLE *Generat on and Corruption* BK II CH 6 [334 10 15] 435a / *Soul* BK I CH 2-5 633a 641d

10 GALEN *Natural Faculties* BK I CH 12 172d 173c

12 LUCRETIUS *Nature of Things* BK II [251 93] 18b d BK II [94 869] 31b-41a BK IV [722 817] 53d 54d [877-961] 55d 56d

17 PLOTINUS *Th rd Ennead* TR I CH 3 79b c / *Fou th Ennead* TR VI 191c 200c E P C I I 4 191c 193c CH 8 195b 196a 196c 197c

19 AQUINAS *Summa Theolog ca* PART I Q 75 A 1 378b 379c Q 84 A 2 ANS 442b 443c A 6 ANS 447 449a

23 HOB ES *Leviathan* INTRO 47a PART I 49a d 80a b PART IV 251a b

31 DESCARTES *Objections and Repli s* 226 d

35 LOCKE *Human Underst nd ng* BK II CH XXV I SECT 21 225d 226a SE T 28 29 228 c BK IV CH II SE T 6 313c 315b CH X S CT 5 350 b SECT 10 351b 352a SE T 17 353b c

35 BERKELEY *Human Kno ledg* SECT 93 431b S CT 137 440b c SECT 141 441a b

42 KANT *Pure Reason* 126c d / *Judgement* 557c 559d 575b 578 578d 582c 599d 600d

46 HEGEL *Ph losophy of Hi tory* PA T I 255d

51 TOLSTOY *War and Pea e* EPI OGUE II 689c 690

53 JAMES *P ychol gy* 95a 119b

54 FREUD *N w I trodu tory Lectu es* 829a b

4 The an lysis of human nature into its facul ties powe s or functions the id ego and super ego in the structure of the psyche

7 PLATO *Republ c* K IV 350a 353d

8 ARISTOTLE *Soul* K II III 642a 668d

19 AQUIN S *Summa The logi a* PART I QQ 77 83 399b-440b

31 DESCARTES *Med tat ns* VI 96b 103d pass m

(4 *The analys s of human nature into its faculties pouers or funct ons the id ego and super ego in the stri cture of the psyche 4b Man s sensiti e and appet ti e powers comparison with s milar funct ons in other animals*)

35 HUME *Human Understand ng* SECT IX 487b 488c
36 SWIFT *Gull er* PART IV 147b 148b
38 ROUSSEAU *Inequality* 331a b 337d 338d 348d 349c
42 KANT *Pure Reason* 164b c / *Intro Metaphysic of Morals* 386b d / *Judgement* 479a d
46 HEGEL *Philosophy of Right* ADDITIONS 121 136c d
48 MELVILLE *Moby Dick* 134b 135a 244a 245b 286b 288a 289b 291a
49 DARWIN *Descent of Man* 261c 262 287d 291c 294c 301c 302b 304a 313a 568d 571b
51 TOLSTOY *War and Peace* EPILOGUE II 689c 690a
52 DOSTOEVSKY *B others Karamazov* BK III 54a b
53 JA IES *Psychol gy* 49a 50a 198b 199b 702a b 704a 706b 712b 737a
54 FREUD *O igin and Development of Psycho Analysis* 20a d / *Na cis sm* 400c-401d / *Inst ncts* 412a-421a c esp 413a 415b / *General Int oduction* 569 585a esp 574a d 579b 581c 584b-c / *Beyond the Pleasu e Pri ciple* 639a 663d esp 640b c 647a 648a 651d 654c 659d 661c / *Ego a d Id* 708c 712a esp 708d 709b / *Inh bit ons Symptoms and Anx iety* 720b 721a 737b 738a 752a / *Civili a t on and Its Disco tents* 782a d [fn 1] 784d 785a / *N w I trodi ctory Lectu es* 840a 853b esp 843d 844c 846a 850a 850d 851d

4c Man s rational powers the problem of s m lar powers in other animals

7 PLATO *Laches* 35b c / *Republ c* BK III 338a 339a BK IV 352b 353d / *Timaeus* 452 454a / *Theaetetus* 535b 536a / *Laws* BK II 653a-c BK V I 723c d
8 ARISTOTLE *Topics* BK V CH 3 [132 17 22] 183a / *Met phys cs* BK I CH I [980b25 27] 499b BK IX CH 2 571c 572a CH 5 573 c CH 7 [1 49 5 12] 574c d / *So l* K I CH 3 [414b1 20] 644d [415a7 12] 645b BK III CH 3-8 659c 664d CH I [433 8 13] 665d / *Mem ory and Rem niscence* CH 2 [453 5 14] 695b
9 AR STOTLE *History of A mals* BK CH I [488b20-27] 9d K IV CH 9 [536b1-8] 63 b BK VIII CH I [588 18 b4] 114b d / *Parts of Ani m ls* BK I CH I [641b5 10] 164b c BK II CI 16 [659b28]-c 1 17 [660 3] 186d 187c BK III CH 6 [669 18 20] 197c CH 10 [673 4 10] 201d 202a BK IV CH 10 [686a25-687b5] 217d 219a / *Generation of An mal* BK V CH 7 [786 15 22] 328c d / *Eth cs* BK I CH 7 [1097b23 1 98 20] 343a-c CH 13 [1102b13 1103 3] 348a-c BK III CH 2 [1111b6-9] 357b BK VI CH I [1138b35]-CH 2 [1139b14] 387b 388b BK VII CH 3 [1147b2-5] 397d BK IX CH 9 [1170 16-18] 423d-424a BK X CH 7-8 431d-434a pas sim esp CH 7 [1177b26 1178 8] 432c CH 8 [1178b23-31] 433c / *Pol tics* BK I CH 2 [1253 7 18] 446b c BK VII CH 13 [1332 39 b10] 537a b CH 15 [1334b8 28] 539b d / *Rhetoric* BK I CH I [1355b1 3] 594d
10 GALEN *Natural Fact lties* BK I CH 12 173a-c
12 EPICTETUS *Discourses* BK I CH 6 110c 112b CH 28 134a c BK II CH 8 146a b CH II 150a 151b BK III CH 7 183c 184a BK IV CH 6-7 231d 233b CH 7 234d 235a
12 AURELIUS *Meditations* BK III SECT 16 262d 263a c BK V SECT 16 271c d BK VI SECT 23 276b BK VIII SECT 7 286a SECT 41 288d BK IX SECT 8-9 292b d BK XI SECT I 302a b
17 PLOTINUS *Third E ead* TR IV CH 2 97d 98a / *F fth Enn ad* TR I CH 10 213d 214a
18 AUGUSTINE *City of God* BK V CH II 216c d BK VII CH 23 256b c BK XII CH 23 357d / *Chri t an Doctrine* BK I CH 8 626c 627a
19 AQUINAS *S mma Theolog ca* PART I Q 3 A I REP 2 14b 15b Q 7 A 2 REP 2 31d 32c Q 59 A 3 ANS 308b 309 Q 76 A 5 REP 4 394c 396a Q 78 A I ANS 407b-409a A 4 NS and REP 4-6 411d 413d Q 79 413d 427a Q 80 A 2 428a d Q 81 A 3 430c-431d QQ 82-89 431d 480c Q 96 A 2 511b d Q 118 A 2 ANS 601c 603b ART I II Q 12 A 5 672a c Q 13 A 2 673c 674c Q 1 A 2 682a c Q 17 A 2 687d 688b
20 AQUINAS *Summa Theologica* PART I II Q 50 A 3 RE 2 8b 9a AA 4-5 9a 10d
21 D NTE *Di i e Comedy* PURGATORY XVIII [19-75] 80 -c XXV [34-84] 91d 92b
23 HOBB S *Leviathan* PART I 52b 53a b 54a 57d 59b 63a PART II 100a c
25 MONT IGN *Essays* 119b d 184a-c
27 SHAKESP A E *Hamlet* ACT IV SC IV [32 39] 59a
28 HARVEY *On A imal Generat on* 427d-428a
30 BACON *Novum Organum* BK II APH 35 163d 164a
31 D SCARTES *Rules* XII 19a 20d / *D scourse* PART I 41b d PART IV 51d 52a PART V 56a b 59c 60b / *Med tati ns* 71b d II 7 d 81d / *Objectio s and Repli s* 156a d 209b c 226a d
31 S INOZA *Ethics* PART I XIOM 2 373d PART II PROP 57 SC IOL 415b
32 MILTON *Pa ad se Lost* BK VII [499-528] 228a b BK VIII [369 451] 240a 242a BK IX [549-566] 259b
33 PASC L *Pensees* 339-349 233a 234a 365 236a / *Vacui m* 357a 358a
35 LOCKE *Huma Understa d g* INTRO SECT I 93a b BK I CH I SECT I 95b d 96a CH III S CT 12 115b 116a SECT 17 117a c SECT 23 119b 120a SECT 25 120c d BK II CH VI 131b-c CH XI 143d 147b esp SECT 8 11 145b-

146a CH XXI SECT 5-6 179c 180a SECT 15 16 181c 182a CH XXVII SECT 12 223a b BK IV CH XIV SECT 3 4 364d 365a CH XVII SECT 1 3 371c 372b

35 HUME *Human Understand ng* SECT VIII DIV 62 478b-c

38 MONTESQUIEU *Sp it of Laws* BK 1 1d 2b

38 ROUSSEAU *Inequality* 337d 338c 349b-c / *Social Contract* BK 1 393b c

39 SMITH *Wealth of Nat ons* BK 1 6d 8b

41 G BBON *Decline and Fall* 150c

42 KANT *Pu e Reason* 164a 165c 199c 200c / *Fund Prin M taphy c of M als* 264d 265a 271c d 279b 281c 282c 284d 285a / *Practi c l Reason* 303b-d 316c 317a / *Pref Meta phy cal Element of E.h cs* 372a b / *Judge ment* 465c-467a esp 466a c 474b-475d 479a d 521b 568 575b esp 568c d 570c 571c 572b-575b 584d 585c 587d 588a 602b d [fn 1]

43 MILL *Liberty* 294a 297b

46 HEGEL *Ph l s phy of Right* ADDITIONS 4-5 116a 117a 121 136c d / *Ph lo ophy of History* INTRO 156c 168b d 186a PART 1 257d 258a PART III 304d 305b

49 DARWIN *D s ent of Man* 278a b 287a b 292a 294c 296c 300a esp 297d 298a 299b 312a 313a 319c 331b 332a 591d 592a

50 MARX *Ca,it l* 85a d

51 TOLSTOY *W a and P ace* EPILOGUE II 689c 690a

53 JAMES *Psychology* 8 a b 184a 187b esp 186a 187a 664a 693b esp 664a b 677a 686b 691a 873a

54 FREUD *Interp etat on of D am* 363b 364b 367b c 377c 3 9c esp 379a b 384c 385c / *Un onscious* 429c d / *General Introduct on* 532a

4d The general theory of faculties the cr tique of faculty psychology

8 ARISTOTLE *Soul* BK II CH 2 3 643a 645b CH 5 [417ᵃ21 418 6] 647d 648d BK II CH 9 664d 665c

10 GALEN *Natu al Facult s* BK 1 CH 1 2 167a b CH 4 169a

19 AQU NAS *Summa Th ol g ca* PART 1 Q 77 399b 407a Q 78 A 1 407b 409a A 4 ANS 411d 413d Q 83 A 2 REP 2 438a d

20 AQUINAS *Summa Th log ca* PART 1 I Q 49 A 3 ANS and REP 2 4b 5a A 4 5a 6a Q 5 A 2 7c 8a Q 54 A 1 2 d 23d Q 56 A 1 ANS 30a c Q 110 A 4 350d 351d

21 D NTE *D in C medy* PURGATORY IV [1 18] 57

30 BACON *Adv an ement f Learn ng* 49d 50b esp 50b 54b

31 DESCARTES *Rules* XII 18b-20d / *Medita t n* IV 89a 93a V 98d 99a 101d 102a / *Obj ct n and Repl* 135b-c

31 SPINOZA *Eth s* PA T II PRO 48-49 391a 394d

35 LOCKE *H man Understand ng* BK 1 CH 1 SECT 1 95b d 96a CH III SECT 1 115b 116a SECT 17 117a c SECT 23 119b 120a SECT 25 120c d BK II CH XXI SECT 6 179d 180a SECT 15 0 181c 183a

35 HUME *Human Understand ng* SECT I DIV 8 454b-c

42 KANT *Judgement* 461a-475d esp 466a-c 474b-475d

53 JAMES *Psychol gy* 1a 2a 17b 18b

5 The order and harmony of man s powers and functions contrad ctions in human nature the higher and lower nature of man

APOCRYPHA *W dom of Solomon* 9 15—(D) OT *Book of W sdom* 9 15

NEW TESTA IENT *Roman* 5-8 esp 7 15 25 / *Gal tians* 4-5 / *Jam s* 4 1 3

7 PLATO *Phaedo* 231b 234c / *Republ* BK IV 350a 355a BK IX 421a 427b BK X 431b-434a / *Timaeu* 466a c / *La s* BK V 686d 687c

9 ARISTOTLE *Eth cs* BK 1 CH 7 [109 ᵇ22 1098 17] 343a-c BK VII CH 6 [1150 1-5] 400c

12 EPICTETUS *D scou se* BK III CH 24 203c 210a BK IV CH II 240d 242d

1 AURELIUS *Medita on* BK I SECT 1 253a BK III SECT 6 261a c BK IV ECT 27 266a ECT 39 267a BK V SECT 26 272c BK VII SECT 13 280c BK IX SECT 1 291a c SECT 7-8 292b

17 PLOTINUS *Th d Ennead* TR IV CH 2 97d 98a / *Fou th Enn ad* TR IV C 1 18 166d 167b / *Sixth Enn ad* TR IV CH 15 304c d

18 AUGUSTINE *Conf ions* BK VIII par 10 1 55d par 19 24 56b 60a BK X 1 p 12 113b d / *City of God* BK XI CH 26-28 336d 338d BK X I C 1 3 361a c CH 5 366c d

19 AQUINAS *Summa Theol g a* PART 1 Q 77 AA 4-7 403a-406b Q 95 A 2 507c 508a PART 1 1 Q 13 A 1 ANS 672d 673 Q 16 A 1 684b-d Q , A 4 688d 689c

20 AQUINAS *Summa Th olog a* PART I II Q 82 A 1 168a d A 4 REP 170b 171a Q 85 A 1 AN 178b 179b Q 91 A 6 ANS 212c 213

22 C IAUCER *Manciple Tale* [7 104 144] 490a b

23 MACHIAVELLI *Prin* CH XVII 25a

23 HOBBES *Leviatha* PART 1 63a 85b 86b esp 86b PART 1 141a b

5 MONTAIGNE *E ays* 105c-107a 161a 162b 326b 327b 381b c

27 S IAKE PEARE *Hamlet* ACT I SC IV [23 38] 36a b / *T lu and Cr da* ACT I SC II [82 1 6] 121a b / *K ng Lea* A T IV SC II [38 50] 270d 271a / *M b th* ACT IV SC I I [132] 303b 304d / *Co olan s* ACT V C VII [8 57] 384c d

30 BACON *Ad ncement of Lea n g* 20 d

31 DESCARTE *Obj t on a d Repl* 207d 208a

33 PASCAL *Pens* 106- 17 193b 194b 125 183 195b 04b 396-424 240b 243b 53 265a

36 SWIFT *Gulliver* PART IV 151b 152a

(5 *The order and harmony of man's powers and functions: contradictions in human nature: the higher and lower nature of man*)

37 FIELDING *Tom Jones* 198a-c 205a-c
38 MONTESQUIEU *Spirit of Laws* BK I 1d-2b
38 ROUSSEAU *Inequality* 337d-338d
42 KANT *Pure Reason* 164a-165c / *Fund Prin Metaphysic of Moral* 282b-283d / *Practical Reason* 292a-293b 316c-317a / *Intro Metaphysic of Moral* 385c-386b / *Judgement* 584d-585c 587a-588a
43 FEDERALIST NUMBER 55 174c-d
43 MILL *Utilitarianism* 448-450a
46 HEGEL *Philosophy of Right* PART II par 139 4 d-49b / *Philosophy of History* PART III 304b-306b
47 GOETHE *Faust* PART I [1110-1117] 27b-28a [3 7-3 50] 79a-b
48 MELVILLE *Moby Dick* 204b-205a
49 DARWIN *Descent of Man* 304a-305a 316a-317a
51 TOLSTOY *War and Peace* BK VI 1 304b-305a
53 JAMES *Psychology* 1a-b 188b-191a 717a
54 FREUD *Interpretation of Dreams* 377c-382a esp 379c-d / *General Introduction* 90c-d 592b-593b 615c-616c esp 616b-c / *Beyond the Pleasure Principle* 640b-d / *Group Psychology* 689d-690c / *Ego and Id* 699-c 711b / *Inhibitions Symptoms and Anxiety* 746-747b esp 747a / *New Introductory Lectures* 830a-832c 834b-c

5a Cooperation or conflict among man's powers

NEW TESTAMENT *Matthew* 5 29-30 26 41 / *Mark* 9 43-47 14 38—(D) *Mark* 9 42-46 14 38 / *Romans* 7 18-23 / *Galatians* 5 16-26 / *Ephesians* 4 17-18 / *I Peter* 2 11
7 PLATO *Phaedrus* 128a-d / *Republic* BK I 308b-309b BK III 338a-339a BK IV 346a-355a BK IX 425c-427b / *Timaeus* 453b-454a 474b-d 476a-b / *Laws* BK I 641a-b 649d-650b
8 ARISTOTLE *Soul* BK II CH 6-3 662d-668d
9 ARISTOTLE *Motion of Animals* CH 11 239-d / *Ethics* BK I CH 7 [1098 3-7] 343b CH 3 347b-348d BK V CH 11 [1138 5-13] 387a BK IX CH 4 [1166b 2-24] 419d-420a / *Politics* BK I CH 5 [1254 33-b8] 448a
12 EPICTETUS *Discourses* BK I CH 2-5 106d-110c BK III CH 2 177c-178a CH 15 190a-191a CH 24 203-210a BK IV CH 1 213a-223d
12 AURELIUS *Meditations* BK I SECT 1 253 BK IV SECT 33 266c-d BK VII SECT 13 280 SECT 55 283b-c BK VIII SECT 1 285-b SECT 39 288c BK IX SECT 1 291a-c SECT 8 292b
17 PLOTINUS *Fourth Ennead* TR IV CH 18 166d-167b / *Sixth Ennead* TR IV CH 15 304c-d
18 AUGUSTINE *Confessions* BK VIII par 10-11 55c-56b par 19-27 58b-60c BK X par 39 81b-c BK XIII par 47 123d-124a / *City of God* BK XIII CH 3 361c CH 15 366c-d BK XIV CH 5-10 379c-385d BK XIX CH 12-14 517b-520d CH 21 524c-525a / *Christian Doctrine* BK I CH 24 630c-631a
19 AQUINAS *Summa Theologica* PART I Q 81 A 3 430c-431d Q 84 A 3 ANS 443d-444d Q 91 A 3 ANS and REP 1 486b-487d Q 95 A 1 ANS 506b-507c A 2 507c-508a Q 96 A 2 511b-d PART I-II Q 37 A 1 ANS 783d-784c
20 AQUINAS *Summa Theologica* PART I-II Q 77 AA 1-2 145a-147c QQ 82-83 168a-174b PART II-II Q 29 A 1 ANS 530b-531a A 2 531a-d PART III Q 15 A 9 REP 3 794c-795b PART III SUPPL Q 96 A 11 1063d-1064d
21 DANTE *Divine Comedy* PURGATORY IV [1-18] 57c
22 CHAUCER *Parson's Tale* par 12 503b
23 HOBBES *Leviathan* CONCLUSION 279a-c
25 MONTAIGNE *Essays* 5a-6c 36c-41a esp 39b-40a 159-162c 274d-276a 344a-347c 405c-406a
26 SHAKESPEARE *Richard II* 320a-351d esp ACT V SC V [1-41] 349d-350a / *Merchant of Venice* ACT I SC II [11-24] 408b-c
27 SHAKESPEARE *Othello* ACT I SC III [329-337] 212c
28 HARVEY *On Animal Generation* 347c-d
30 BACON *Advancement of Learning* 72b-78a-d
31 DESCARTES *Meditations* I 75-77c IV 89-93a esp 90b-91b VI 102d-103a / *Objections and Replies* 155d-156a 207d-208a 209c
31 SPINOZA *Ethics* PART III PROP 1-2 396a-398b PART IV PROP 7 COROL 426b PROP 60 442d-443a
32 MILTON *Paradise Lost* BK III [561-594] 244b-245a BK XI [466-543] 309b-311a
33 PASCAL *Pensées* 125 131 195b 411-413 242a
36 STERNE *Tristram Shandy* 239b
38 ROUSSEAU *Social Contract* BK I 393b-c
40 GIBBON *Decline and Fall* 192b
42 KANT *Fund Prin Metaphysic of Morals* 282b-283d / *Pref Metaphysical Elements of Ethics* 368d-369a / *Intro Metaphysic of Morals* 390b-d 394a-c / *Judgement* 509c-d
43 MILL *Liberty* 293b-302 passim / *Utilitarianism* 448a-450a
44 BOSWELL *Johnson* 135c-d 455
47 GOETHE *Faust* PART I [354-521] 11a-15a [1110-1117] 27b-28a [3 17-3250] 79a-b
49 DARWIN *Descent of Man* 311a-314b esp 312a-313a 313d-314b 318d-319a
51 TOLSTOY *War and Peace* BK 15a-b BK VI 235-238c BK X 554b-555c BK XI 577a-578b BK XIV 605b-d BK XV 630c-631a
52 DOSTOEVSKY *Brothers Karamazov* BK II 39-40a BK I 53b-54b BK IV 95b-100c BK V 127b-137c passim BK VI 164b-d
53 JAMES *Psychology* 199b-204b esp 199b-200b 717-718 734b-735a 799a-800a
54 FREUD *Interpretation of Dreams* 370b-379a 380d / *Narcissism* 407a-408a 409d-410b /

Uncon cious 433c / General Introd ct on 589c 591a 635b c / Ego and Id 702c d 704a d 708d 712a passim esp 711c d 715b 716c / Inh b tion Symptom and Anxiety 720a 722c esp 721d 722c / C l at on and Its D scon ents 785b [fn 1] 787a 788b 790a 791d 797c 799a 800d 801a / New Introductory Lectu s 837d 839b

5b Abnormal t es due to defect or confl ct of powers f eble mindedness neuroses ns n ty madness

5 AESCHYLUS Choephoroe [10 1 10 6] 80a d
5 SO HOCLES Ajax 143a 155a c esp [1 330] 143a 146a
5 EURIPIDES Orestes 394a-410d esp [1 423] 394a 398b
6 HERODOTUS H story BK III 96b-98a
7 PLATO Republ c BK IX 416a-417b / Timaeus 474b d / Laws BK VI 712b
8 ARISTOTLE Cat go CH 8 [9b34 10a6] 15a
9 ARISTOTLE Parts of Animals BK IV CH 5 [686b22 9] 218b c / Eth cs BK III CH 10 [1118 17 b7] 364d 365a BK VII CH 1 [1145a27 33] 395a b CH 3 [1147a10-19] 397b CH 5 399a d C 1 6 [1149b24 1150a8] 400b-c
12 E ICTETUS Disc u s BK I CH 5 110b-c BK II C 15 155c 156b
12 AURELIUS M d tat ons BK I I SECT 1 259b d
13 VIRGIL Aene d BK VII [323 405] 245a 247b
19 AQUINAS Summa Th ol g ca PART 1 Q 84 A 7 ANS 449b-450b Q 115 A 5 REP 1 590d 591c PART I II Q 6 A 7 REP 3 650a d Q 10 A 3 ANS and REP 2 664d 665c Q 24 A 2 727d 728c Q 28 A 3 ANS and REP 1 742 d Q 31 A 7 757c 758b Q 37 A 4 REP 3 785d 786d
23 HOBBES Lev athan PART 1 66d 67b 68b d 69b c
25 M NTAIGNE Essays 5a 6c 10b 11b 25c 26d 36c-41a 166a 167a 235b-c 274d 276a 316b c
26 SHAKESPEARE Richa d III 105a 148a c
27 SHAKESPEARE Hamlet ACT IV SC V 59c 62a ACT V SC II [236-255] 70b-c / Oth ll ACT IV SC I [1-59] 229d 230b / K ng Lea ACT IV SC IV [1 19] 272b-c SC VII [16-82] 276d 277c / Ma beth ACT V SC I 306b 307a C I I [37-56] 308a b
28 HARVEY On Animal Generati n 347c d
29 CERVANT S D n Qu xote esp PART I 1a 3b PART II 205a 209d
31 DESCARTES Obj ct ns and Repl e 155d 156a
35 LOCKE C vil G ernment CH V SECT 60 37d 38a / Human Understand ng BK II CH XI SECT 12-13 146a-c BK IV CH IV SECT 13 16 326d 328d esp SECT 13 326d 327a
37 FIELDING T m J n s 109c
44 BO WELL Johnson 13a 14a 214b-c 354c 355a
47 GOETHE Fau PART I [44 5 46 2] 110a 114b
48 MELVILLE Moby D ck 122b 124a 136a b 232a 236a 380b 381a 388b 389a
49 DARWIN Descent of Man 299c
51 TOLSTOY W a and Peace BK XI 510b-d 515a 517a 524c 527a BK XV 616a 617a
52 DOSTOEVSKY Brothers Ka ama ov BK II 21d 22b BK XI 337a 348d BK XII 364b 369a
53 JAMES Psy hology 23b 26b esp 25b 26b 32a 34a 35b-37a 132a 137b esp 137a 147b 149a 241b 258b esp 242a 244b 251b 252a 258a b 749a 750b 753b 754b 799b 807a 818a 819a 828b 829a
54 FREUD O g n and Development of P ycho Analysis 7a 8b / Hysteria 35b-c 52d 53c 81d 86c 97b 106c 111a 115a / Interpretation of D ams 176a d 328c 364c d 370b-c 380d 382a / Na c s sm 409c d / Uncon ciou 433c / General Introduct on 558a c 585b 623b esp 586a 592b 593c 595b 600b-c 604c 606a 616b c 623a b 624b d 627a b 635b-c / G p P ychology 690a 691c / Ego and Id 713a 715a / Inhibit ns Symptoms and Anx ty 721c 722b 723d 728b 731d pas m 746c 748a / New Introd ctory Le t e 812a 830d 832a 872a d

6 Ind vidual d fferences among men

6a The cause and range of human inequalities d fferences n ab l ty inclination temperament hab t

APOCRY HA Eccle a t cu 33 10-15 38 24 34— (D) OT Eccle a t cu 33 10-15 38.25 39
NEW TESTAMENT R mans 12 3-8 / I Corin th an 2 / II T mothy 2:20 21
4 HOMER Il ad BK XIII [723-734] 95d 96a / Ody ey BK V II [65 185] 223d 224a BK XIV [199 232] 262b c
5 SOPHOCLES Ajax [1226-1263] 153c 154a
5 EURIP DE R esus [1 5 108] 204a / Electra [358 400] 330b d / Heracle Mad [632-636] 370c / Iph genia at Aul s [558-572] 429d 430a
5 ARISTOPHANES Frog [1482 1499] 581d 582a
6 THUCYDIDES P l ponnesian War BK I 370a c 383d 384a BK III 425b-c
7 PLATO E th dem us 70c / Gorg as 274a 275c / Republ c BK I 316c 320c BK III 329c 330a 339b 341a BK V 357b 360d BK VI 373c 375b 383c d BK VIII 404a-405c BK IX 421a-c / Theaetetu 540c 541a / Stat man 605d 608a / Laws BK VI 699d 700b 704a-c / Seventh Letter 809c 810d esp 810
8 ARISTOTLE Cat g ie C 1 8 [8b25-9 3] 13d 14a [9b9-10 10] 14c 15a / Po terio Analyt s BK I CH 34 122c / Mem ry and Rem n sc nc CH [449b3-9] 690a [450a25 b12] 691a c
9 ARISTOTLE H st y of An mal BK VII CH 1 [582 5 16] 107c d C 1 2 [583 4 14] 108c / Pa t of A mal BK IV CH 1 [686b2 29] 218b-c / Generat n of An mal BK I CH 18 [725b25-726a6] 266a BK IV CH

(6 Indu dual d fferences among men 6a The cause and range of human inequalities d ffe ences n ab l ty inclinat on tempera ment habit)

(6 *Indu dual differences among men 6b The d ff rences between men and women their eq ality or ineq ality*)

38 MONTESQUIEU *Spi it of Laws* BK VII 47c 50d BK XVI 116a c BK XXIII 189d 190a BK XXVI 217d 218a
38 ROUSSEAU *Inequality* 346a / *Political Economy* 367d 368a
40 GIBBON *Decl e and Fall* 92d 93b
42 KANT *Science of Right* 404d 419c 420a 436d 437c
43 CONSTITUTION OF THE U S AM NDMENTS XIX 19d
43 MI L *Liberty* 311a 312a 317c d / *Representa ti e Government* 387d 389b
44 BOSWELL *Johnson* 132a 165b c 312a 312c 391c 392a 537a c
46 H GEL *Philosophy of Right* PART I I par 165–166 59d 60a ADDITIONS 104 133d 106–107 134a b / *Philosophy of History* PART I 222d
47 GOETHE *Faust* PART I [35 3535] 8ca [3978 3985] 97a PART II [9127–9134] 222a
49 DARWIN *De cent of Man* 257 264d 265a 372d 373c 383b 384d 562a 567c esp 566a 567b 584c 585d 588d 589a
51 TOLSTOY *War and Peace* BK I 51d BK IV 184b BK VI 263b 264b BK VII 287a b BK XI 488b BK XII 543b 544a K XV 639a b EPILOGUE I 659b 660d 661b
53 J MES *P ychol gy* 691b 692a 720a 887b [fn 3]
54 FREUD *Na c ssism* 405b 406a / *Ego and Id* 705a 706 707d / *C l atio and Its Di co tents* 785a [fn 1] / *N w Int oductory Lectures* 853b 864a esp 854a 855a 862a 863c

6c The ges of man infancy youth matur ty senescence

OLD TESTAMENT *Genes s* 17 15 19 18 9 5 2 1-8 27 1 / *Deutero my* 34 7 / *I Kings* 1 1 4—(*D*) *III Ki s* 1 1 4 / *Job* 32 6–9 / *P overbs* 2 29 / *Isa ah* 65 2 —(*D*) *Isa as* 65 20
APOCRYPHA *Ecclesiasticus* 14 17 18—(*D*) OT *Eccles st cus* 14 18 19
N V TE TAM NT *John* 21 18 / *I Cor th ans* 13 11
4 HO ER *Iliad* BK XXIII [448 499] 165d 166b [566-649] 167a 168a [,85 ,92] 169 BK XXIV 171a 179d esp [349–5 1] 175a 177a
5 AESCHYLUS *Agamem on* [71–82] 52d
5 SOPHOCLES *O dipus at Colonu* [1211 1248] 125b c / *A t g ne* [631 767] 136c 137d / *Philoctetes* [96–99] 183a
5 EURIPIDES *Al est s* [6 9–705] 242c 243a
5 ARISTOPHANES *Acharni s* [676–718] 463a-c
7 PLATO *Laches* 31c / *Sympos um* 166a / *Meno* 174b 175c / *Republic* BK I 295d 297b BK II 320c 321d K IV 353b d BK VI 380d 381a BK VII 398c 401d / *Timaeus* 471d 472a / *Theaetetus* 514b c / *Laws* BK II 653b c 655b 6 6c 659c d BK VII 713d 714a 723c d BK XII 796a d / *Seventh Letter* 802b
8 ARISTOTLE *Top cs* BK I I CH 2 [117 26 34] 164a / *Physics* BK VII CH 3 [247^b13 248 6] 330c d / *Soul* BK I CH 4 [408^b18 9] 638c / *Memory and Reminiscence* CH I [450 6 ^{b}9] 691a b
9 ARISTOTLE *History of Animals* BK II CH I [50 ^{b}25–501 4] 23a b CH 4 24a b BK III C I II [518 6 ^{b}29] 42c 43c BK IV CH 9 [536^b5-8] 63a b CH 10 [537 14 20] 64b BK V CH 14 [544^b13 27] 71b c [545^b26-30] 72c BK VII CH I 106l d 108a CH 5 [585 33] CH 6 [585^b29] 111b d CH 10 [587^b5 18] 113d 114a BK VIII CH I [588 24–^{b}5] 114b d / *Parts of An al* BK IV CH 10 [686^b5–30] 218a c / *Gait of An mals* CH II [710^b12 18] 248d / *Generati n of A imals* BK I CH 18 [725^b18 25] 265d 266 CH 19 [72, 2 10] 267a b BK IV CH 2 [766^b27 34] 308b CH 6 [775 9– 8] 317a b CH 8 [776^b15 28] 318d 319a K V CH I [778^b20 79^b13] 321a d [780 14 ^{b}10] 322b d C I 3 [781^b30 782 20] 324a b CH 3 [783^b2]-CH 4 [785^a7] 325c 327a / *Ethics* BK I CH 3 [1094^b 29–1095 12] 340a b CH 9 [1099^b33 1100 9] 345b c BK III C I 12 [1119^a34 ^{b}19] 366a c BK VI CH 8 [1142 12 19] 391b BK X CH 3 [1174 1 4] 428b / *Polit cs* BK I CH 13 [1259 29 126 33] 454b 455a BK VII CH 14 [1332^b36–41] 537c d BK VI I CH 7 [1342^b18 33] 548c / *Rheto i* BK I CH 5 [1361^b6–15] 602a b BK II CH 12 14 636a 638a
10 HIPPOCRAT S *Injuries of the Head* par 18 69a b / *Aph r ms* SECT I par 13 14 131d CT II par 39 133c par 53 133d SECT III par 3 134 par 18 134d par 24 31 135a b SECT VI par 6 140 par 29 30 141a par 57 141d S CT VII par 82 144a / *Sacred D sease* 157b 158b
12 LUCRETIUS *Nature of Things* BK III [445 458] 35d 36a BK IV [1037 1057] 57d BK V [222 234] 64a
13 VI IL *Aeneid* BK VIII [152 174] 263a b [51 -520] 272b 273a
18 AUGU TINE *C nf ssions* BK I par , 13 2c 4 par 30–3 8b 9a / *C ty of God* BK XXI CH 16 573b 574a
19 AQUINAS *Summa Theolog ca* PART I Q 77 A 8 REP 3 406b-407a Q 96 A 3 ANS 512 c PART I II Q 34 A I RE 2 768c 769d Q 40 A 5 R P 2 795d 796c A 6 796 797a
20 AQUIN S *S mma Theol gica* PART I II Q 94 A I REP TO CONTRARY 221a d PART III UP L Q 70 A I REP 7 893d 895d
21 D NTE *D ine C medy* PURGATORY X I [85 I 5] 77d
22 CHAUCER *Reeve s Prologue* [3862 3896] 224 b
23 MAC HAVELL *Prince* C XXV 36b
23 HOB S *Le athan* PART I 53d 60b 78b-c
24 R B L IS *Garg ntua and Pantag uel* BK I 14c 19a

25 MONTAIGNE Essays 43a c 63d 64b 72b c 74b 156d 158a c 185d 188d 339a d 394a 395b 406a-408b 432d-434a 535c 536a
26 SHAKESPEARE 1st Henry VI ACT II SC V [1-16] 12d 13a / 3rd Henry VI ACT V SC I [161-174] 66d / 2nd Henry IV ACT III SC II [321-357] 486d-487a / Henry V ACT I SC I [2 -69] 533b c / As You Like It ACT II SC VII [137-166] 608d 609a
27 SHAKESPEARE Hamlet ACT II SC II [197 209] 42c d / Troilus and Cressida ACT II SC II [163-173] 115b / King Lear 244a 283a c esp ACT I SC I [291 312] 247c d, SC II [48 53] 248b-c [75 79] 248c d SC III [12 1] 249d 250b SC IV [58 344] 252c 253c ACT II SC IV [148 158] 260a ACT IV SC II 276c 277d / Macbeth ACT V SC III [20 28] 307d
28 HARVEY On Animal Generation 450a b
30 BACON Advancement of Learning 70b c
32 MILTON Paradise Lost BK XI [527-543] 310b-311a
35 LOCKE Civil Government CH VI 36a-42a passim
35 HUME Human Understanding SECT VIII DIV 66 480b
36 SWIFT Gulliver PART I 127a 128a
36 STERNE Tristram Shandy 352b-353b
38 MONTESQUIEU Spirit of Laws BK XXIII 188a
38 ROUSSEAU Inequality 336a b / Social Contract BK I 387d 388a BK II 402d
39 SMITH Wealth of Nations BK V 309d 310
43 FEDERALIST NUMBER 79 234c d
43 MILL Liberty 271d 272a
44 BOSWELL Johnson 8b 55c 56a 126d 128b 146b d 360b 381a 407d-408a 422c
46 HEGEL Philosophy of History INTRO 169d 187d 188b 203d 206a,c PART I 222d 257 d PART II 259a b
47 GOETHE Faust PRELUDE I [184 13] 5a b [2337 365] 6b 57a [4076-4087] 99b PART I [6685-6818] 164a 166b [10 331 344] 251b 252a
49 DARWIN Descent of Man 297b 562 563a
51 TOLSTOY War and Peace BK II 132b-c 153d 154b BK I 168d 169b 171c d BK V 205d 207b BK VII 305b-310d passim BK X 391d 394d 400c 401d BK XII 559d BK XII 584c EPILOGUE I 659d 660b
52 DOSTOEVSKY Brothers Karamazov BK I 7a 8d BK V 117c 127b BK 1 167c 168a BK X 27 a 297d EPILOGUE 411b-412d
53 JAMES Psychology 206b 207 242a 270 409 b 413b [fn 2] 431b-433a 649b 650a 711b-717a
54 FREUD Origin and Development of Psycho-Analysis 15a 16 17b 18a / Sexual Enlightenment of Children 119a 122a c passim / Interpretation of Dreams 191b-193 238b 246b passim esp 238 239a 241b c 243a-c / Narcissism 400 b 406b-407 410b / General Introduction 49 a-496b 526d 527b 528d 531d 572d 576d 579b 584d 592c 594d 599d 612d 614b / Beyond the Pleasure Principle 641d 643c esp 643b c 644d 645a 651b c / Group Psychology 685b 686a 693 c / Ego and Id 704d 706c / Inhibitions Symptoms and Anxiety 725d 726a 738b 740c 743a 744a 746c 747a 751d 753c / Civilization and Its Discontents 768b d / New Introductory Lectures 855b 863c esp 855d-858d 860b 861c 869a 870c

7 Group variations in human type racial differences

7a Biological aspects of racial type

6 HERODOTUS History BK II 69b d BK III 91b-c 113d 114a b BK IV 128a c 131b-c 143b-c
9 ARISTOTLE History of Animals BK III CH 9 [517ᵃ12 -0] 41 CH 22 [523 17 19] 48c BK II CH 4 [584ᵇ8 15] 110b / Generation of Animals BK II CH 2 [736 9-13] 276d BK V CH 3 [782ᵇ30-783] 324d 325a
10 HIPPOCRATES Airs Waters Places par 3 7 9 12a par 12 15 14b 15c par 19-24 16c 19a c
26 SHAKESPEARE Titus Andronicus ACT IV SC I [5 127] 188b 189a ACT V SC I [20-53] 192c d
27 SHAKESPEARE Othello ACT I SC II [62-81] 208b-c SC III [94 1 6] 210a
38 MONTESQUIEU Spirit of Laws BK XIV 102b d 104c
40 GIBBON Decline and Fall 546d
41 GIBBON Decline and Fall 49d
44 BOSWELL Johnson 113a
46 HEGEL Philosophy of History PART IV 352a 353a
48 MELVILLE Moby Dick 304a 305a
49 DARWIN Descent of Man 342a 359d esp 348 350b 356 359d 62d 565a passim 573d 576d 578a 589d esp 583b 584d 586a 589 d 591 c

7b The influence of environmental factors on human characteristics climate and geography as determinants of racial or national differences

6 HERODOTUS History BK I 31d 32a BK II 91b c BK IX 314a c
7 PLATO Laws BK V 696d
9 ARISTOTLE Politics BK VII CH 7 [1327ᵇ19 38] 531d 532a
10 HIPPOCRATES Airs Waters Places par 3 7 9 12a par 12 13 14b-15a par 15 16 15b-16 par 9 21 16c 17b par 23 4 18 19a c
12 LUCRETIUS Nature of Things BK I [106-1113] 94d 95a
14 PLUTARCH Solon 7 d / Pompey 512 d
25 MONTAIGNE Essays 279b c
26 SHAKESPEARE Henry V ACT III SC V 547a c
36 SWIFT Gulliver PART II 79a 80 PART IV 168a b

(7 *Group variations in human type racial differences 7b The influence of environmental factors on human characteristics climate and geography as determinants of racial or national differences*)

36 STERNE *Tristram Shandy* 203a 204a 224a b 295b 296b
38 MONTESQUIEU *Spirit of Laws* BK XIV 102b d 108d BK XV 111a b BK XVI 116a 120a BK XVII 122a 124d passim BK XIX 125a 129c BK XXI 153a 154 BK XXIII 190c d
38 ROUSSEAU *Inequality* 349a / *Social Contract* BK III 415b-417c
39 SMITH *Wealth of Nations* BK IV 291a c
40 GIBBON *Decline and Fall* 45d 87d 88a 397c 398a 409d 412c esp 410a 411a
41 GIBBON *Decline and Fall* 220b 223c passim esp 221b c 338b c 341b 342c 778a [n 1]
43 FEDERALIST NUMBER 11 55d 56b
46 HEGEL *Philosophy of Right* PART III par 346 111b / *Philosophy of History* INTRO 190b-201a c PART I 235c d 236d 237a 251d 252d PART II 259d 260a
49 DARWIN *Descent of Man* 267a c 268b 269a 343c 344a 356b 358d 584a b

7c Cultural differences among men Greek and barbarian Jew and gentile European and Asiatic

OLD TESTAMENT *Genesis* 12 1 4 15 17 1 18 9 6 1 6 7 46 35 9 13 / *Exodus* 34 1 7 / *Leviticus* 26 / *Deuteronomy* 7 1 8 10 15 14 2 26 7 19 28 1 10 58-65 / *Judges* 14-16 / *Ruth* / *I Kings* 8 38 43 51-53 11 1 10—(D) *III Kings* 8 38 43 51 53 11 1 10 / *I Chronicles* 17 21 24—(D) *I Paralipomenon* 17 21 24 / *Esther*—(D) *Esther* 1 1 10 3 / *Ezekiel* 37 21 22—(D) *Ezechiel* 37 21 22 / *Daniel* 1 1-8
APOCRYPHA *Rest of Esther*—(D) OT *Esther* 10 4 6 24 / *II Machabees* 6 1 11 11 22 26—(D) OT *II Machabees* 6 1 11 11 22 26
NEW TESTAMENT *Matthew* 10 5-6 / *Acts* 15 1 29 esp 15 9 15 17 16 16 24 / *Romans* 2 9-29 3 29-30 4 11 12 10 12 / *I Corinthians* 1 22 24 12 13 / *Galatians* 3 26-29 4 21 31 / *Ephesians* 2 11 22 / *Colossians* 3 9 11
4 HOMER *Iliad* BK IV [422 445] 28a b
5 EURIPIDES *Medea* 212a 224a c / *Andromache* 315a 326a c esp [147 244] 316c 317b [445-453] 319a b [590-601] 320b / *Hecuba* [1196-1201] 363a / *Iphigenia Among the Tauri* 411a-424d / *Iphigenia at Aulis* [1395 1401] 437d
6 HERODOTUS *History* 1a 314a c passim esp BK I 12d 13b 35b c BK II 57d 58a 61d 69b d BK III 97d 98a BK IV 137 138c 140d 141a BK V 163d 164a BK VII 216b-d 232d 233d 253b 254a BK VIII 264c 287c d BK IX 291c-292a 298a 302c 305d 306a 308d 310c
6 THUCYDIDES *Peloponnesian War* BK I 350b d 366a c 370a-c BK II 395d 397d BK VIII 589d 590a
7 PLATO *Cratylus* 106b c / *Republic* BK IV 350c d BK V 357d 358a 367b 368c / *Statesman* 582d 583b / *Laws* BK I 645b-647c
9 ARISTOTLE *Politics* BK I CH 2 [1252b5-9] 445d CH 6 [1255a28-37] 448d-449 BK III CH 14 [1285a17 29] 483b-c BK VII CH 7 [1327b19-38] 531d 532a
10 HIPPOCRATES *Airs Waters Places* par 16 15d 16a par 23 18a-c
14 PLUTARCH *Themistocles* 99b c / *Marcellus* 254c 256b / *Flamininus* 303 310d
15 TACITUS *Annals* BK II 23d 24a / *Histories* BK V 295d 296a
18 AUGUSTINE *City of God* BK I CH 1 17 129d 140b BK I CH 34 206d 207a c BK XVI CH 16 433c-434a CH 18 434c CH 21 28 435a 440b CH 32 442b c BK XIX CH 22 525b c
20 AQUINAS *Summa Theologica* PART I II Q 98 AA 4-5 242b 244b QQ 102 105 270b 321a passim
22 CHAUCER *Troilus and Cressida* BK II ST 3-7 22a b / *Tale of Man of Law* [4631 4644] 238a / *Prioress's Tale* [13 418-620] 392a 395b
23 HOBBES *Leviathan* PART I 267c d
25 MONTAIGNE *Essays* 44b 48a 91d 98b esp 93b 94a
26 SHAKESPEARE *Merchant of Venice* ACT I SC II 409-411b ACT II SC III 414a b ACT III SC I 418d-420a SC I 423b d ACT IV SC I [386-40] 429 d
31 DESCARTES *Discourse* PART II 46b c
37 FIELDING *Tom Jones* 266 269b
38 MONTESQUIEU *Spirit of Laws* BK XIV 102b d 108d BK X 110a d BK XVI 116a 120a BK XIX 135a 146a c passim BK XXI 153a c
38 ROUSSEAU *Inequality* 352b / *Social Contract* BK II 402d-403a
40 GIBBON *Decline and Fall* 99c 179d 183a 207b 20 d 260d 261a 402a 409d-410
41 GIBBON *Decline and Fall* 32d 34c 35b 36c 222d 226a passim esp 224b 300 -c 336c 339b passim 341b 343a 508d 509d
42 KANT *Judgement* 504a b
43 MILL *Liberty* 300d 302 307d 308c
46 HEGEL *Philosophy of Right* PART III par 351 112a b / *Philosophy of History* 153 369 c passim esp INTRO 161 -c 174b d 176b 177b-178a 182d 183a 183d 188b 192a 194a 196d 199d PART I 211a 221 222 233a 235c d 245d 247b 250a-c PART II 276d 277a 277d 278a 279c d PART III 289b d 312c 313a PART IV 352a 353a
48 MELVILLE *Moby Dick* 17 19a 36b-46a 60b 65a 350b 354b
49 DARWIN *Descent of Man* 323 b 571b-577d esp 573b-c 575d 577b c 584a b

51 TOLSTOY *War and Peace* BK III 140d 141b BK IV 171b BK VIII 309b-c BK IX 358b 365c passim esp 362d 363a BK XI 497c-499c 515c 521c BK XIII 575d 577a BK XV 624d 626d
52 DOSTOEVSKY *Brothers Karamazov* BK V 123b 125c
54 FREUD *New Introductory Lectures* 882c d

8 The origin or genealogy of man

8a The race of men as descendants or products of the gods

6 HERODOTUS *History* BK II 79c 80a
7 PLATO *Protagoras* 43d 45a / *Symposium* 157b 158b / *Timaeus* 452c-454a 466a-467d / *Laws*, BK IX 743a b
12 EPICTETUS *Discourses* BK I CH 3 108b-c CH 6 111a-c CH 13 120b CH 17 123d BK III CH II 187a b CH 24 204b-c
14 PLUTARCH *Alexander* 553d 554b
17 PLOTINUS *Second Ennead* TR I CH 5 37b-c
18 AUGUSTINE *City of God* BK III CH 4 170c
48 MELVILLE *Moby Dick* 345b 346b
49 DARWIN *Descent of Man* 265d

8b God's special creation of man

OLD TESTAMENT *Genesis* 1 6–27 2 7 18 21 23 5 1 2 / *Job* 10 8 12 / *Psalms* 8 4–6 100 3 119 73 139 14 16—(D) *Psalms* 8 5–7 99 3 118 73 138 14 16 / *Isaiah* 29 15 16 43 7 45 1 —(D) *Isaias* 29 15 16 43 7 45 12 / *Jeremiah* 27 5—(D) *Jeremias* 27 5 / *Malachi* 2 10—(D) *Malachias* 10
APOCRYPHA *Wisdom of Solomon* 2 23 6 7 10 15 10-11—(D) OT *Book of Wisdom* 2 23 6 8 10 1 15 0-11 / *Ecclesiasticus* 17 3 33 0-13—(D) OT *Ecclesiasticus* 17 1 3 33 10-14 / *II Maccabees* 7 23 28—(D) OT *II Machabees* 7 3 28
NEW TESTAMENT *Matthew* 19 4 / *Mark* 10 6 / *Acts* 7 4 29 / *I Corinthians* 15 45 / *Colossians* 3
18 AUGUSTINE *City of God* BK VII CH 29–3 261a-c BK X CH 31 319b d BK XII CH 10–13 348b 350d CH 2 21 356d 357b CH 23 357d 358a H 26- 7 359a 360 c K X II CH 4 373d 376 K XXII CH I 586b d 587b / *Christian Doctrine* BK I CH 2 629b-c
19 AQUINAS *Summa Theologica* PART I Q 72 A 1 REP 1 368b 369d Q 73 A R P 3 370a 371a Q 75 A 6 REP 1 383 384c QQ 90–92 480c-491d Q 1 8 600 604b
21 DANTE *Divine Comedy* PURGATORY XVI [85 90] 77d XXV [34 78] 91d 92 PARADISE VII [64–84] 115d 116 [1 48] 116b-c X [5 - 87] 126a b
22 CHAUCER *Monk's Tale* [4 0 3-0 0] 434b
23 HOBBES *Leviathan* PART I 176d PART V 251a b
30 BACON *Advancement of Learning* 41b-c 54b-c

31 DESCARTES *Discourse* PART V 56a b / *Meditations* III 87d 88d
32 MILTON *Paradise Lost* BK I [650–659] 107b BK II [345 353] 118b 119a BK VII [139–161] 220a b [499–550] 228a 229a BK VIII [452 499] 242a 243a BK XI [497–511] 310a b
35 LOCKE *Civil Government* CH II SECT 6 26b-c CH VI SECT 56–57 36d 37a
37 FIELDING *Tom Jones* 187d 188a
41 GIBBON *Decline and Fall* 228a
49 DARWIN *Descent of Man* 265d 590b
51 TOLSTOY *War and Peace* EPILOGUE II 689b
52 DOSTOEVSKY *Brothers Karamazov* BK V 120d 121c
53 JAMES *Psychology* 420a
54 FREUD *General Introduction* 562d

8c Man as a natural variation from other forms of animal life

38 ROUSSEAU *Inequality* 334b d
42 KANT *Judgement* 578d 580a esp 579b c
47 GOETHE *Faust* PART II [8245–8 64] 201a [8321–8326] 202b 203a
49 DARWIN *Descent of Man* 253a 287b esp 253a 254a 255a c 265a d 284c 285c 331a 341d esp 341a d 590a 591d 596d 597a c
51 TOLSTOY *War and Peace* EPILOGUE II 689c 690a
53 JAMES *Psychology* 51b-52b 95a 98a
54 FREUD *General Introduction* 509d 510a 562d 591d 592a / *New Introductory Lectures* 881a

9 The two conditions of man

9a The myth of a golden age the age of Kronos and the age of Zeus

5 AESCHYLUS *Prometheus Bound* 40a 51d
6 HERODOTUS *History* BK II 80a
7 PLATO *Cratylus* 92b d / *Timaeus* 444c 446b / *Critias* 478 485d / *Statesman* 586c 589c / *Laws* BK V 681b d
13 VIRGIL *Eclogues* V 14a 15b / *Georgics* I [118 146] 40a-41a / *Aeneid* K [254–296] 110a 111a BK VIII [306–336] 267a 268a
14 PLUTARCH *Numa Pompilius* 59d 60b
15 TACITUS *Annals* BK I 51b
21 DANTE *Divine Comedy* HELL XIV [94 1] 20 d PURGATORY XXII [130 154] 87d 88 XXVIII [136–148] 97
24 RABELAIS *Gargantua and Pantagruel* K III 143b-d
25 MONTAIGNE *Essays* 215b
27 SHAKESPEARE *Tempest* ACT SC I [143–168] 532d 533a
29 CERVANTES *Don Quixote* PART I 27b 28a PART 208a c
30 BACON *Advancement of Learning* 71d 72a
35 HUME *Human Understanding* SECT XI DIV 6– 7 499b 500b
37 FIELDING *Tom Jones* 268 d
46 HEGEL *Philosophy of History* INTRO 188c

9b The Christian doctrine of Eden and of the history of man in the world

9b(1) The condition of man in Eden the preternatural powers of Adam

OLD TESTAMENT *Genesis* 1:26-30 2:7-25

APOCRYPHA *Wisdom of Solomon* 1:13-16 2:23-24—(D) OT *Book of Wisdom* 1:13-16 2:23-25 / *Ecclesiasticus* 17:1-15—(D) OT *Ecclesiasticus* 17:1-13

18 AUGUSTINE *City of God* BK XI CH 12 329b-c BK XII CH 21 357a-b BK XIII CH 1 360a-b CH 13-14 366a-c CH 23 372a-373c BK XIV CH 10-13 385b-388c CH 15-17 388d-391a CH 21-24 392b-395b CH 26-27 395d-397a BK XXII CH 30 617c-618a

19 AQUINAS *Summa Theologica* PART I Q 76 A 5 REP 1 394c-396a QQ 94-102 501c-527a,c

20 AQUINAS *Summa Theologica* PART I-II Q 89 A 3 200d-201d Q 109 A 2 ANS 339c-340b A 3 ANS 340c-341b A 4 ANS 341c-342a A 8 ANS 344d-346a PART II-II Q 2 A 7 ANS 396a-397c Q 5 A 1 ANS 410a-411b PART III Q 1 A 3 REP 1 704d-706a

21 DANTE *Divine Comedy* PURGATORY XXVIII [91]-XXIX [36] 97a-98a PARADISE VII [64-93] 115d-116a XIII [31-87] 125d-126b

22 CHAUCER *Monk's Tale* [14,013-020] 434b / *Parson's Tale* par 18 507a-b

23 HOBBES *Leviathan* PART III 191b-192c PART IV 250c-d

30 BACON *Advancement of Learning* 17d-18a

31 SPINOZA *Ethics* PART IV PROP 68 SCHOL 445a-b

32 MILTON *Paradise Lost* BK I [650-654] 107b BK III [56-371] 136b-143b BK IV [32-538] 153a-164a esp [131-171] 155a-156a [205-392] 157a-161a [610-775] 165b-169a BK V [1-560] 175a-187b BK VII-VIII 217a-246b esp BK VIII [1-560] 232a-244a BK IX [1-1004] 247a-269a BK XI [45-71] 300a-b BK XII [63-110] 320b-321b

33 PASCAL *Pensées* 560 272b

46 HEGEL *Philosophy of History* INTRO 179d-180c PART III 304d-306a

51 TOLSTOY *War and Peace* BK V 275a

52 DOSTOEVSKY *Brothers Karamazov* BK V 125a-126a

9b(2) The condition of man in the world fallen man corrupted or wounded human nature

OLD TESTAMENT *Genesis* 3 esp 3:15-19 6:5-13 8:21 / *Job* 5:7 8:9 14:15 passim 25:4-6 / *Psalms* 8 14:2-3 39:5-6,11 51:2-5 53:1-3 103:13-15 144:3-4—(D) *Psalms* 8 13:2-3 38:6-7,11-12 50:4-7 52:1-4 102:13-15 143:3-4 / *Proverbs* 20:9 / *Ecclesiastes* esp 2:18-26 3:19 5:16-19 6:1-12 7:20 7:27-29 9:3—(D) *Ecclesiastes* esp 2:18-26 3:19 5:15-18 6:1-11 7:21 7:28-30 9:3 / *Jeremiah* 17:9—(D) *Jeremias* 17:9

APOCRYPHA *Wisdom of Solomon* 1:13-16 2:1-12,23-24—(D) OT *Book of Wisdom* 1:13-16 2:1-12,23-25

NEW TESTAMENT *Matthew* 15:10-20 / *Mark* 7:14-23 / *John* 8:3-8 / *Romans* 3:9-23 5:12-21 7:14-24 8:20-23 9:29 / *I Corinthians* 3:1-4 15:21-22 / *Galatians* 3:22 4:1-3 5:19-21 / *Ephesians* 2:1-5 / *I John* 1:8 15-17

18 AUGUSTINE *City of God* BK XII CH 22 357c BK XIII CH 3 361a-c CH 10 364a-c CH 13-14 366a-c CH 23 372a-373c BK XIV CH 1 376b-d 377a CH 3 378a-d CH 12 387a-b CH 15 388d-396c BK XXI CH 12 571a-c CH 15 572c-573b BK XXII CH 22-23 606d-609a

19 AQUINAS *Summa Theologica* PART I-II Q 17 A 9 REP 3 692d-693d

20 AQUINAS *Summa Theologica* PART I-II QQ 81-83 162d-174b Q 85 A 1 ANS 178b-179b A 3 180b-181b A 5 181d-182d Q 91 A 6 ANS 212c-213c Q 109 338a-347d passim PART III Q 8 A 5 REP 1 760a-d QQ 14-15 784a-796a

21 DANTE *Divine Comedy* HELL, XIV [94-120] 20c-d PURGATORY III [16-45] 56a-b X [121-129] 68c-d XVI [52-114] 77b-78a XXVIII [91-96] 97a PARADISE VII [19-148] 115b-116c XIII [31-87] 125d-126b

22 CHAUCER *Monk's Tale* [14,013-020] 434b / *Second Nun's Prologue* [15,497-552] 461b-462b / *Second Nun's Tale* [15,788-82] 467b / *Parson's Tale* 495a-550a esp par 18 506b-507b par 53 526b-527a

23 HOBBES *Leviathan* PART III 191b-193c passim 195d PART IV 250c-251b 253b-255b passim

24 RABELAIS *Gargantua and Pantagruel* BK II 81a-b

25 MONTAIGNE *Essays* 238c

30 BACON *Novum Organum* BK II APH 52 195a-d

32 MILTON *Paradise Lost* BK I [1-6] 93b-94a BK II [496-505] 122a [1021-1033] 133b BK III [167-216] 139a-140a [274-343] 141b-143a BK IV [304-310] 159a-b BK VII [542-547] 229a BK IX [780-1189] 264b-273a BK X [103-117] 276b-277a [229-414] 279b-283b [585-640] 287a-288b [720-844] 290a-293b [1046-1104] 297a-298b BK XI [45-71] 300a-b [84-98] 301a [162-180] 302b-303a [251-262] 304b-305a BK XI [334]-BK XII [649] 306b-333a

33 PASCAL *Pensées* 430 245a-247b 434-435 248a-251a 439-450 251a-253a 560 272b

37 FIELDING *Tom Jones* 38d

44 BOSWELL *Johnson* 482a

46 HEGEL *Philosophy of Right* ADDITIONS 14 118c-d / *Philosophy of History* PART III 304d-306a

50 MARX *Capital* 354b

51 TOLSTOY *War and Peace* BK VII 275a

52 DOSTOEVSKY *Brothers Karamazov* BK III 54a-b BK V 125a-126a 127b-137 passim BK VI 165b-169c

9b(3) The Christian view of the stages of human life in the world law and grace

NEW TESTAMENT Matthew 5 17-44 / Luke 16 16-17 / John 1 17 3 3-8 / Acts 10 13 38-39 / Romans 2-8 / II Corinthians 3 5 17 / Galat s / Ephesians 2 14 15 4 17 24 / P il pp ans 3 8-10 / Colossians 2 3 / II Timothy 1 8 10 / Hebrews / I Peter 1 1 2 10

18 AUGUSTINE Confessions BK XIII par 49-51 124a d / City of God BK X CH 14 307c 308a CH 25 313c 314c BK XII CH 2 357c BK XV XVIII 397b d 507a,c esp BK XV CH I 3 397b d 399c CH I 415b-416a BK XVI CH 26 438c-439a CH 37 444b-445a BK XVII CH I 4 449a-455 BK XVIII CH II 477c d BK XX C I 4 532b-c BK XXI C I 16 573b-574a BK XXII CH 30 618c-d / Christian Doctrine BK III CH 33 670b-c

19 AQUINAS Summa Theologica PART I Q 51 A 2 REP I 276b-277a Q 73 A I REP I 370a 371a

20 AQUINAS Summa Theologica PART I-II Q 98 239b 245b QQ 106-107 321a 330d PART II-II Q I A 7 REP 4 385c 387a

21 DANTE Divine Comedy PARADISE VII [19-148] 115b 116c

22 CHAUCER Pars n s Tale par 53 526b 527a

32 MILTON Paradise Lost BK III [56-415] 136b-144b esp [130-134] 138a, [227-238] 140b K x [2] 299a b [251 262] 304b 305a BK XI [334]- K X I [649] 306b 333a

33 PASCAL Pen es 560 272b 653 292b 699 302b

52 DOSTOEVSKY Brothers Karamazov BK V 127b 137c passim

27 SHAKESPEARE Cymbeline ACT III SC III 465c-466c

30 BACON Advancement of Learning 20c d

31 SPINOZA Ethics PART IV PROP 37 SCHOL 2 435b-436a

35 LOCKE Toleration 16a c / Civil Government CH II 25d 28c esp SECT 14 15 28b-c CH III SECT 19 29b-c CH VII SECT 94 46a c CH IX 53c 54d

38 MONTESQUIEU Spirit of Laws BK I 2b 3a BK VIII 52a

38 ROUSSEAU Inequality 329a 366d esp 329a 334a c 362a 366d / Social Contract BK I 387b d 394d esp 393b-c BK II 398a b 400d 401a

39 SMITH Wealth of Nations INTRO 1b c BK I 6a d BK III 163d 164a BK V 309a 311c

40 GIBBON Decline and Fall 53b c 86b d 96d passim esp 88d 89d 92c d 398d 399a 409d-414a passim esp 409d-410a 566a b 632b 634a c

41 GIBBON Decline and Fall 86d 87b

42 KANT Pure Reason 222b-c / Science of Right 402c 405d-406c 408c 409c 412c-414c 433c 434d 435c 436b 450d 451a

43 FEDERALIST NUMBER 51 164c d

43 MILL Liberty 272a / Utilitarianism 472b c

44 BOSWELL Johnson 110d 124d 126a 164d 204c 205a 209a 214b 221c d 311b 408d 409a 510b c

46 HEGEL Philosophy of Right PART III par 187 65a c par 194 66c d par 256 79d 80a ADDITIONS 126 137a b 129 137c / Philosophy of History INTRO 171c 172b 179d 182 188c 196d 199d PART 209b 235d 236a 240a b 243d 244c PART II 260b-261a 267b 268b PART IV 317d 318a

48 MELVILLE Moby Dick 9b 23b 136b 137a 171b 221b-223b 354a

49 DARWIN Origin of Species 13c / Descent of Man 314c 316a 317 d 320a 330a c passim esp 323a b 328d 330a c 349b d 351a 355d

50 MARX ENGELS Communist Manifesto 421c

54 FREUD War and Death 755a 766d passim esp 759c d 763a 766c / Civilization and Its Discontents 776c 782d e p 776c 777b 780d 781a 788d 789b

9 Secular conceptions of the stages of human life man in a state of nature and in society prehistoric and historic man primitive and civilized man

4 HOMER Odyssey BK IX [105 141] 230b c

5 AESCHYLUS Prometheus Bound 40a 51d esp [196-256] 42b d [44 -506] 44c-45a

6 THUCYDIDES Peloponnesian War K I 349a 354b

7 PLATO Protagoras 44a-45a / Symposium 157b 159b / Republic BK II 311b-c / Laws BK II 663d 667b

9 ARISTOTLE Politics BK II CH 8 [69 4-8] 465

12 LUCRETIUS Nature of Things BK V [9 1457] 73b 80 c

13 VIRGIL Aeneid BK VI [3 6-336] 267a 268a

15 TACITUS Annals BK III 51b

23 HOBBES Leviathan PART I 84c 86b 94b-c PART IV 267c 268a

25 MONTAIGNE Essays 91d 98b esp 93b 94 237d 238c 440b-443d

26 SHAKESPEARE As You Like It 597a 626a c esp ACT II I [20] 603c d ACT III SC II [1-90] 609d-610c

10 Man's conception of himself and his place in the world

10a Man's understanding of his relation to the gods or God

OLD TESTAMENT

NEW TESTAMENT

4 HOMER Iliad 3a 179d esp BK I 3a 9a c BK II [340-447] 13b 14c BK IV [183] 24 25d BK V 30a 39 K VI I 51a 56d, BK X V XV 98a 111d K XVI [431-461] 117a b [843 867] 121c d BK XVI [I 37] 130a 131c K XX XXI 142a 154d K XX V [513-551] 176d 177a / Odyssey 183a 322d

(10 *Man's conception of himself and his place in the world* 10a *Man's understanding of his relation to the gods or God*)

5 Aeschylus *Suppliant Maidens* [86–103] 2a b / *Persians* [798 831] 23d 24a / *Seven Against Thebes* 27a 39a c / *Prometheus Bound* 40a 51d / *Agamemnon* 52a 69d / *Choephoroe* 70a 80d / *Eumenides* 81a 91d

5 Sophocles *Oedipus the King* [863–910] 107b c / *Oedipus at Colonus* 114a 130a c esp [258 91] 116c d [959–999] 123b c [1751–1753] 129d / *Antigone* 131a 142d / *Ajax* 143a 155a c esp [430 459] 146d 147a [666–677] 148d [748 783] 149c d / *Trachiniae* 170a 181a c esp [94 140] 171a b [1264 1278] 181c / *Philoctetes* [441–463] 186a [1316–1347] 193d 194a

5 Euripides *Hippolytus* 225a 236d esp [936–1466] 232d 236d / *Alcestis* [962–996] 245c / *Suppliants* 258a 269a c esp [195 245] 260a c [734–749] 264d / *Trojan Women* 270a 281a c esp [895–990] 277c 278b [1277 1283] 280d / *Ion* 282a 297d esp [237 451] 284a 286c / *Helen* 298a 314a c esp [711–721] 304d 305a / *Andromache* [1070–1288] 324b 326a c / *Electra* 327a 339a c esp [1233 1359] 338b 339a c / *Bacchantes* 340a 352a c / *Heracles Mad* [1301 1356] 376b d / *Orestes* 394a-410d esp [316 347] 397a b [1625 1693] 410b d / *Iphigenia Among the Tauri* 411a-424d esp [378 391] 414b [570 575] 416a [903–911] 419a [1435 1499] 424a d / *Iphigenia at Aulis* [1034 1035] 434c [1279–1335] 436d-437a

5 Aristophanes *Clouds* [356–411] 492b 493c / *Birds* [1189 1266] 557c 558b [1494 1765] 560c 563d / *Plutus* 629a 642d esp [76–146] 630a d

6 Herodotus *History* BK I 7b 10a esp 9d 10a 12d 13b 20b 22a 39a d 40d 41a BK III 98b-c 99a BK IV 124d 125a 159d BK VII 217c 224d 225a 250b BK V 262b c 279d 280a BK IX 309d

6 Thucydides *Peloponnesian War* BK V 506b-c

7 Plato *Cratylus* 94a 106b / *Phaedrus* 125b 126c / *Ion* 144b 145c / *Euthyphro* 191a 199a c / *Apology* 206b d / *Phaedo* 222b d / *Republic* BK II 314c d 320c 324c / *Timaeus* 447a 477a c passim / *Critias* 478a-485d / *Theaetetus* 530b 531a / *Laws* BK I 650a b BK II 653b c BK IV 682d 683d BK V 686d 689c passim BK VII 721a-c BK X 757d 771b

8 Aristotle *Topics* BK I CH II [105 2-6] 148c / *Metaphysics* BK I CH 2 [982b28–983 5] 501a b

9 Aristotle *Ethics* BK VII CH I [1145 15 33] 395a b BK VIII CH 7 [1158b29–1159 13] 410d-411a / *Rhetoric* BK II CH 5 [1383 33 b8] 629c-d CH 17 [1391 30–b3] 638d

12 Lucretius *Nature of Things* BK II [581–660] 22b 23b [1090–1104] 29a BK III [978 1023] 42d-43b BK V [146–234] 63a 64a [1161 1240] 76b 77b BK VI [43–79] 80d 81b

12 Epictetus *Discourses* BK I CH 3 108b-c CH 6 110c 112b CH 12 118d 120b CH 14 120d 121c CH 17 123c 124a BK II CH 8 146a 147c BK IV CH I 218b 219d CH 3 224b d CH 4 226d 228a CH 7 232c 235a

12 Aurelius *Meditations* BK II SECT I 256b d SECT 3 4 257a b SECT II 13 258a c BK III SECT 6 261a c SECT 13 262c BK V SECT 8 269d 270b SECT 27 272d BK VI SECT 40 277d SECT 42 278a b SECT 44 278b c BK IX SECT I 291a c BK XII SECT 2 307b SECT 5 307d 308a SECT 3 309a b SECT 30 310a b

13 Virgil *Aeneid* 103a 379a esp BK IX [77 122] 281a 282a BK X [96–117] 304b 305a [621 632] 319a b

14 Plutarch *Numa Pompilius* 50d 51c / *Coriolanus* 189a-c

15 Tacitus *Annals* BK III 59d 60c BK VI 91b d BK XVI 179d 183d / *Histories* BK I 189d 190a BK II 235a c

17 Plotinus *Second Ennead* TR IX CH 9 71a / *Third Ennead* TR II CH 8–9 86c 88a

18 Augustine *Confessions* 1a 125a c passim / *City of God* 129a 618d / *Christian Doctrine* BK I 624a 636a c BK II CH 7 638d 639c

19 Aquinas *Summa Theologica* PART I Q 8 A 3 ANS and REP 4 36b 37c Q 17 A I ANS 100d 101d Q 22 A 2 REP 4 5 128d 130d QQ 23 24 132b 143 Q 83 A I REP 2 4 436d 438a Q 103 A 5 REP 3 531b 532b A 8 REP 1 2 533d 534b Q 116 592d 595 PART I II QQ 1 48 609a 826a c

20 Aquinas *Summa Theologica* PART I II QQ 49–114 1a 378a c

21 Dante *Divine Comedy* esp PARADISE I [94 142] 107b d VII [19 120] 115b 116b XIX [40–66] 135c d

22 Chaucer *Troilus and Cressida* BK I STANZA 30–35 5a b BK III STANZA 89 66a BK IV STANZA 136–155 106a 108b BK V STANZA 259 267 154a 155a / *Knight's Tale* [1251 1274] 180b 181a [1303 1333] 181b 182 / *Tale of Man of Law* 236b 255b esp [4869–4931] 242b 243b [5240–5253] 249b / *Friar's Tale* [7056–7085] 281a b / *Franklin's Tale* [11 177 206] 353b-354a / *Prioress's Tale* 391a 395b / *Tale of Melibeus* par 17 407b 408a / *Monk's Prologue* 432a-434a / *Monk's Tale* 434a 448b / *Nun's Priest's Tale* [15 236–256] 456b 457a / *Second Nun's Tale* 463b 471b / *Parson's Tale* 495a 550a esp par I 495a b par I 503b 504a par 52–56 526a 528 par 103 549b 550a

23 Machiavelli *Prince* CH XXV 35a b

23 Hobbes *Leviathan* PART I 54b c 78d 83 PART II 113b-c 159d 164a c PART IV 254b 260b-c 272b-c

24 Rabelais *Gargantua and Pantagruel* BK IV 265a d

25 Montaigne *Essays* 98b 99a 208a 294b esp 209a 212d 233a 234a 246a 258b

10b Man as the measure of all things

10c Man as an integral part of the universe his station in the cosmos

10d The finiteness and insufficiency of man his sense of being dependent and ordered to something beyond himself

(10 *Man's conception of b ms lf and b s place n the world* 10d *Th f niteness and ns ffi ciency of man b s sens of being dep ndent and order d to som thing beyond b mself*)

APOCRYPHA *Wisdom of Solomon* 9 14 17 16 26—(D) OT *Book of Wisdom* 9 14 17 16 26 / *Ecclesiasticus* 18 7 11 33 10 15—(D) OT *Ec lesia ticus* 18 6-10 33 10-15

NEW TESTAMENT *Luke* 4 4 / *Romans* 14 7-9 / *I Cor nthians* 2 3 / *James* 4 13 16 / *I Peter* 1 24

5 AESCHYLUS *Suppl ant Ma dens* [86-103] 2a b

5 EURIPIDES *Alce tis* [962-996] 245c / *S ip pl ants* [195 245] 260a-c [734-749] 264d / *Heracles Mad* [1301 1356] 376b d

6 HERODOTUS *H story* BK I 7b 8a 20b 21a 46c d BK II 65b BK III 98b c 99a 103d 104b BK IV 153b d BK VII 252b-c BK IX 291b c

7 PLATO *Phaedo* 246c / *Laws* BK I 650a b BK VII 721a c BK X 767c 768c

8 ARISTOTLE *Metaphys cs* BK XII CH 10 [1075 12 24] 605d 606a

12 EPICTETUS *Discourses* BK IV CH 7 232c 235a

12 AURELIUS *M d tations* BK II SECT 3 257a b SECT 17 259b d BK III SECT 10 261d 262a BK V SECT 33 36 266c d BK V SECT 10 270c d SECT 33 273b c BK VII SECT 44-50 282b 283a BK XII SECT 32 310c

14 PLUTARCH *Aemiliu Paulu* 225b c 229a c / *Sull* 370c 371b / *Deme r us* 739c 740d 744b-c

15 TACITUS *Annals* BK III 49c BK IV 68d 69b BK VI 91b d / *H sto ies* BK I 194a c BK II 232d 233a BK IV 281a b

17 PLOTINUS *Th rd Enn ad* TR II CH 9 87d

18 AUGUSTINE *Conf s ns* BK I par 1 2 1a c BK IV pa 15 19 23a 24b BK V par 1 2 27a c BK II par 16-17 48c 49a BK IX par 23 26 68a d BK X par 7 8 73a c par 33 40 79d 81c BK X I par 10 101c BK XIII par 9 112c d / *C ty of God* BK XII CH 1 342b d 343c BK XIX CH 4 1 511a 516d / *Christian Doctrine* BK I CH 38 635c d

19 AQUINAS *Summa Theolog a* PART I Q 12 A 1 ANS 50c 51c A 8 REP 4 57b 58b Q 60 A 5 ANS 313b 314c PART I II Q 2 A 3 617b-618a A 8 621c 622b Q 3 AA 6-8 627b 629c Q 5 A 3 638b 639a A 5 640b 641a

21 DANTE *Dwine Comedy* HELL VII [61-96] 10b c PURGATORY III [16-45] 56a b X [21 129] 68c d XI [1 30] 68d 69a XVI [52 105] 77b d PARADISE VII 115a 116c

23 HOBBES *Leviathan* PART II 163d 164a

25 MONTAIGNE *Es ays* 6d 10a pa m 149b d 208a 294b esp 213a 215b 231d 234a 251c 252b 269d 270a 294a b 503b d 514d 515a 520b d 528c 529b

31 DESC RTES *Med tat on* III 81d 89a pass m / *Objections and Replies* 122a b 214a d

31 SPINOZA *Ethics* PART I APPENDIX 369b-372d PART IV PREF 422b d 424a PROP 2-6 425a-426a

32 MILTON *Sonn ts* XVI 66b 67a / *Lo d Gen Cromwell* 69a b / *Mr Cyriack Sk nner* 70a / *Pa ad se Lost* BK VI [168 188] 200a / *Samson Agonistes* 339a 378a esp [164 175] 343a b [373 419] 347b 348b [667-704] 354a 355a

33 PASCAL *Pensé s* 72 181a 184b 205 211a 208 211b 227 213a 233 213b 216a / *Geometric l Demonst ation* 439b

35 LOCKE *H man Unders and ng* BK II CH II SECT 3 128b-c CH VII SECT 5-6 132c d CH XV SECT 12 165b c CH XXIII SECT 12 13 207a 208b BK IV CH XIV SECT 1 2 364b c

38 MONTESQUIEU *Sp it of La s* BK I 1a 2b

38 ROUSSEAU *Ineq al ty* 366b d

46 HEGEL *Philo ophy of Right* PART III par 270 85c par 340 110b-c / *Ph lo phy of His ry* INTRO 162a 170b 196d 198b PART II 266d 280b 281b PART III 304c 306c

47 GOETHE *Faust* PROLOGUE 7a 9b P RT I [652-655] 17b [997 010] 25b

51 TOLSTOY *Wa and P ace* BK I 50b c BK V 196a 198b BK VI 243d 250a 262c BK VIII 303a 305b BK XIV 605b d BK XV 631a-c EPILOGUE I 646d 647b 650b d 659c d 671c 672a EPILOGUE II 692c 694d

10e *Man's comparison of himself with other creatures and with the universe as a whole*

7 PLATO *T maeu* 447b-455c esp 452c-453c 466a b / *Phil bi* 618c 619c

9 ARISTOTLE *Eth s* BK VI CH 7 [1141 2 b2] 390a b / *Polit* BK I CH 8 [1256b15 22] 450c

12 LUCRETIUS *Natu e of Th ngs* BK VI [647-652] 89a

12 EPICTETUS *D sc u ses* BK II CH 5 143d 144a BK III CH 13 189a

12 AURELIU *M ditat ons* K IV SECT 4 264a

16 KEPLER *Ep tom* K IV 915b 916a

17 PLOTINUS *S cond Ennead* TR IX CH 7 69c 70a

19 AQU NAS *Summa Theol gica* PART I I Q 1 A 8 REP 2 692a c

22 C IAUCER *T lus and Cr sida* BK I STANZA 31 35 5a b BK V STANZA 263 154b / *T e of Man f Law* 236b 255b esp [4610-4623] 237b [4 01 4729] 239a b

24 RABELAIS *Gargantua and Pantagru l* BK III 135b 139b

25 MONTAIGNE *E ays* 213d 215a 259a-d

27 SHAKE PEARE *Hamlet* ACT II SC II [303 331] 43d ACT III SC I [122 132] 48b SC I [53-63] 55a b ACT IV SC III [17 33] 58a b / *K g Lea* ACT III SC II 262d 263d SC IV 264a 266b c p [105 114] 265b / *Ma beth* ACT V SC V [16-28] 308d 309a / *Ant ny and Cleo pat a* ACT V SC II [76-100] 347a b / *Pericles* ACT I SC I [41-55] 422b ACT II C I [1 11] 427b / *Tempest* ACT IV SC I [48-158] 543b

29 CERVA TES *D n Qu x te* P RT II 237 427a

30 BACON *Advancement of Learni g* 50c 51d
31 SPINOZA *Ethics* PART II PROP 13 SCHOL 378a-c
32 MILTON *Sonnets* VII 63b / *Paradise Lost* BK IV [411-735] 161b-168b esp [411 491] 161b 163 [721-735] 168a b BK VIII [249-559] 237b 244a / *Samso Agonistes* [164 175] 343a b [667-704] 354a 355a
33 PASCAL *Pensées* 72 181a 184b 347 348 233b 234a
35 LOCKE *Human Understanding* BK II CH XXIII SECT 12 13 207a 208b BK III CH VI SECT 12 271d 272b esp 272b BK IV CH XVI SECT 12 370c 371a
36 SWIFT *Gulli er* PART I 3a-42a PART II 45a 87b PART IV 172b 173a
36 STERNE *Tristram Shandy* 383a 384a 394a
38 ROUSSEAU *Inequality* 349b-c
42 KANT *Pure Reason* 175b [fn 1] / *Fund Prin Metaphysic of Morals* 271d 273b esp 271d 272c 274a 277b / *Practical Reason* 327d 328b 348a b 360d 361d / *Pref Metaphysical Elements of Ethics* 373d / *Judgement* 583b-c 584d 587a 591b 592d
46 HEGEL *Ph losophy of H story* INTRO 168b d
47 GOETHE *Faust* PROLOGUE [280-292] 8a PART I [652-655] 17b PART II [11 404 419] 277b
48 MELVILLE *Moby Dick* esp 84b-85a 123a b 168a b 171b 204a, 209b 236a 239a 313b-314a 318a 319a b 341b-343a 347b 353b-354b 360b-361a 363a 364a 370b 371b 381a 409b-410b
51 TOLSTOY *War and Peace* BK III 156d 162b-164a,c BK V 217b 218b
52 DOSTOEVSKY *Brothers Karama ov* BK V 117c 127b passim
53 JAMES *Psychology* 655a 659a esp 655b 657b
54 FREUD *General Int oduct on* 562c 563a / *New Introductory Lectures* 874a

11 The theological conception of man

11a Man as made in the image of God

OLD TESTAMENT *Genesis* 1.26-27 5 1 9 6
APOCRYPHA *Wisdom of Solomon* 2:23—(D) OT *Bo k of Wisdom* 2 23 / *Eccles asticus* 17 1 3—(D) OT *Ecclesiast cus* 17 1-3
NEW TESTAMENT *I Corinth ans* 11 7 15.49 / *II Corinth ans* 3 18 / *Colossians* 3 8 10 / *James* 3 9
18 AUGUSTINE *Confessions* BK VI par 4 36a b BK X II par 12 113b d par 32 119a b / *C ty of God* BK XI CH 26-28 336d 338d BK XI CH 23 357d 358a CH 27 359c d / *Ch istian Doctrine* BK I CH 22 629b 630a
19 AQUINAS *Summa Th ologica* PART I Q 3 A I REP 2 14b-15b Q 14 A 2 REP 3 76d 77d Q 32 I R P 2 175d 178a Q 35 A 2 REP 3 189d 190d Q 59 A I CONTRARY 306c 307b Q 72 A I R P 3 368b-369d Q 77 A 2 R P I 401b-d Q 88 A 3 REP 3 472c-473a Q 91 A 4 REP I 2 487d-488c Q 93 492a 501c Q 106 A I REP 3 545d 546d PART I II PROLOGUE 609a c
20 AQUINAS *Summa Theologica* PART I II Q 55 A 2 REP 3 27a d Q 110 A 4 ANS 350d 351d
21 DANTE *Divine Comedy* PARADISE V [19-24] 112b VII [64-84] 115d 116a
22 CHAUCER *Troilus and Cressida* BK V STANZA 263 154b
30 B CON *Adi ancement of Learni g* 41b-d
31 DESCARTES *Meditat ons* III 88c d / *Objec t ons and Replies* 214a d
32 MILTON *Pa adise Lost* BK IV [285 294] 158b [356-365] 160a b BK VII [519-523] 228b BK XI [466-522] 309b 310b / *Areopagitica* 384a
33 PASCAL *Pensees* 430-431 246b 247b 434-435 249b 251a
46 HEGEL *Ph losophy of History* INTRO 168b-d PART III 304d 305b 310d
47 GOETHE *Faust* PART I [486-517] 14a b [614-685] 17a 18a
54 FREUD *Ci ilization and Its Discontents* 790d

11b The fatherhood of God and the brotherhood of man

OLD TESTAMENT *Genesis* 4 1 15 / *Leviticus* 19 11 13 18 33-34 / *Deuteronomy* 10 17 19 / *Psalms* 82 6 103 13—(D) *Psalms* 81 6 102 13 / *Isaiah* 2 1-4 45 1 13 63 15-16—(D) *Isaias* 2 1-4 45 11 13 63 15 16 / *Micah* 4 1-5—(D) *Micheas* 4 1-5 / *Malachi* 2 10—(D) *Malach as* 2 10
APOCRYPHA *Ecclesiasticus* 13 15 17 25 1—(D) OT *Ecclesiasticu* 13 19-21 25 1 2
NEW T STAMENT *Matthew* 5 38-48 12 46-50 19 19 22 39 23 8-9 25 34 40 / *Mark* 12 31 33 / *Luke* 10:27 / *Joh* 1 12 8 41 42 13 34-35 15 12 17 / *Acts* 17.22 34 esp 17 24 26 / *Romans* 3.29 8 14 19 12 13 8 10 14 10-13 / *II Corinth ans* 6 17 18 / *Galat ans* 3.26-28 5 13-14 / *Ephesians* 2 13 22 3 6 14 15 4 1-6 25 5 1 2 / *Colossians* 3 9-14 / *I Thessa lonians* 4 9-10 / *I Peter* 1:22 2 17 / *I John* 2 9 11 3 1 2 10-18 4 7 11 20-21 5 1 2
12 EPICTETUS *Discourses* BK I CH 9 114c 116b CH 13 120b-c BK III CH 11 187a b .c 1 22 199b d CH 24 203c 204c 207a b
12 AURELIUS *Med tat ons* BK III SECT 4 260b-261a SECT 11 262a b SECT 13 262c BK VI SECT 42 278 b BK IX SECT 1 291a c
18 AUGUSTINE *City of God* BK XII CH 21 22 357a-c CH 27 359d / *Christ an Doctrine* BK I CH 22 629b 630a CH 30 632 -633b
20 AQUINAS *Summa Theologica* PART II I QQ 25 27 501a-527a Q 29 A 3 ANS 531d 532c A 4 ANS 532 533a Q 44 AA 2-3 593d 595b A 7 597b 598a Q 184 A 2 REP 3 629d 630d
22 CHAUCER *Parson's T le* par 31 517b-518b
30 BACON *Advancement f Learn g* 31d 32a
44 BOSWELL *Johnson* 392b-c
46 HEGEL *Ph losophy of History* PART III 308a b 310d 311a

(11 *The theological conc pt on of man 11b The fatherbood of God and the broth rhood of man*)

48 MELVILLE *Moby D ck* 84b 85a
51 TOLSTOY *War and Peace* BK V 196a 198b 213a 218b BK XI 525c 526b
52 DOSTOEVSKY *B others Karama ov* BK V 117c 137c passim BK VI 146b d 170d passim
53 JAMES *Psychology* 887a b
54 FREUD *G oup Psychology* 674c d

11c God incarnate in human form the human nature of Christ

NEW TESTAMENT *Matthew* 1 18 25 2 11 11 18 19 13 54 56 14 33 16 13 17 17 1-9 22 41 46 26 63-66 27 26 54 / *Mark* 3 9-12 6 2 3 14 61-62 15 15 39 / *Luke* 1 2 esp 1 26-38 2 8 12 5 18 26 7 33-34 11 27 28 22 67-70 23 24 47 24 2 7 36-43 / *John* 1 1 18 esp 1 14 1 30-34 5 16-47 esp 5 27 6 42 8 12 28 10 22 38 11 27 14 19 25 34 20 24 2 14 / *Romans* 1 3 4 8 3 / *II Corinthi ns* 5 16 / *Galat ans* 4 4 / *Ephes ans* 2 14 16 / *Pl l p pian* 2 5-8 / *Colo an* 1 12-20 / *I Timothy* 2 5 3 16 / *Hebrew* 1 1-6 2 14 18 4 14 15 5 7-8 7 20-25 / *I John* 1 1-4 2 18 29 4 2 3 / *II John* 7 11
18 AUGUSTINE *Confessions* BK V par 20 32d 33a BK VII par 13 14 47c-48b par 24 25 50d 51c BK X par 67 70 88b 89a BK XI par 4 90a b / *C ty of G d* BK X CH 15 293a 294a CH 17 295a c BK X CH 20 311b-c CH 22 312a b CH 24 312d 313c CH 27 29 315b-318b BK XI CH 2 323a c BK XXI CH 15 16 572c 574a / *Chr stian Doctrine* BK I CH 11 14 627b-628b CH 34 634b c
19 AQUINAS *Summa Theologica* PART I Q 51 A 2 REP 1 276b 277a A 3 REP 5 277a 278 Q 95 A 1 REP 1 506b 507 PART I II Q 5 A 7 REP 2 642a d
20 AQUINAS *Summa Theolog ca* PART III QQ 1 26 701b d 846d esp QQ 4 15 730c 796a Q 26 845a 846d PART III SUPPL, Q 76 A 1 ANS 939d 941a Q 95 A 3 ANS 1045b 1046d A 4 ANS 1046d 1047d
21 DANTE *Divine Comedy* PURGATORY XXIX [106-120] 98d 99 XXXI [76-126] 101c 102a XXXII [28 48] 102c d PARADISE II [37 45] 108a VII 115a 116c XIII [31-87] 125d 126b XXXIII [76-145] 157a d
22 CHAUCER *Tro lus and Cr s da* BK V STANZA 264 154b / *Pr ess s Tale* [13 383 417] 391a b / *Pa s n s Tale* par 12 13 503b 505a
23 HOBBES *Let athan* PART III 182a b
32 MILTON *Ch ts Nat vy* 1a 7b / *The Passion* 10b-12a esp [15 21] 10b 11a / *Upon the Circumci on* 12b-13a / *Pa ad e Lost* BK III [56-415] 136b-144b esp [238 241] 140b [281 343] 141b-143a BK XI [22 36] 299b 300a BK XII [355 465] 327a 329a
33 PASCAL *Pensées* 512 262a 553 268a 270a 763-765 322a 785 325b 862 342b 343a
40 GIBBON *Decl ne and Fall* 308a b
41 GIBBON *De l ne and Fall* 134a 161a c esp 134a 138a 230d 231a
46 HEGEL *Ph lo oph y of H story* PART III 306b-307b 308a b
52 DOSTOEVSKY *B others Ka ama ov* BK V 127a 137c

12 Man as an object of laughter and ridicule comedy and sat re

5 ARISTOPHANES *Acha n ans* 455a 469a c / *Knight* 470a-487a c / *Cloud* 488a 506d / *Wasps* 507a 525d / *Peace* 526a 541d / *Birds* 542a 563d / *Frogs* 564a 582a c / *Lysistrata* 583a 599a c / *Thesm phoriazusae* 600a 614d / *Eccl a usae* 615a 628d / *Plutus* 629a 642d
7 PLATO *Phaedo* 237b c / *Philebus* 629a 630c
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I Works by authors represented in this collection
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Chapter 52 MATHEMATICS

INTRODUCTION

IT is necessary for us to observe the difference between problems *in* mathematics and the problem of the truth *about* mathematics In the case of any science—in physics logic or metaphysics as well as mathematics—it is one thing to examine the discourses or treatises of the scientists on the special subject matter of their field and quite another to examine discussions of the science itself its scope branches and unity its objects its methods and its relation to other disciplines The chapter on QUANTITY deals with the subject matter of arithmetic geometry and other branches of mathematics here we are primarily concerned with the nature of mathematical science itself

Sometimes reflections on the nature of a science are expressed by experts in its subject matter who comment on the scientific enterprise in which they are engaged in prefaces or interspersed remarks Sometimes such reflections are the commentary on a particular science by those who may claim to speak with competence on the processes of the human mind the nature of knowledge or of science in general but who claim no special competence in the particular science under consideration This is usually the commentary of philosophers who may assert their right to make all knowledge as well as all reality their province The same man may of course be both a mathematician and a philosopher as for example Plato Descartes Pascal

In the case of mathematics the disparity between discourse *in* and *about* the science could hardly escape notice Even if no preliminary rule of caution were laid down we should be struck by the contrast between the agreement mathematicians have been able to reach in the solution of their problems and the disagreement of the commentators on basic questions about mathematics To this there may be one significant exception Mathematics is honored for the precision of its concepts the rigor of its demonstrations the certitude of its truth Even its detractors—like Swift or Berkeley—concede the exactitude and brilliance of mathematics while questioning its utility or they admit its intellectual austerity while challenging some application of its method Its clearness and certainty of demonstration Berkeley writes is hardly anywhere else to be found

This general agreement about the quality of mathematical thought may explain why in all epochs mathematics has been looked upon as the type of certain and exact knowledge Sometimes it is taken as more than a model for other sciences it is regarded as the method of pure science itself or as the universal science Sometimes its excellences are thought to be qualified by the limited or special character of its objects or it is contrasted with other disciplines which employing different methods deal with more fundamental matters no less scientifically But always the conclusions of mathematics serve to exemplify rational truth always the method of mathematics represents the spirit of dispassionate thought always mathematical knowledge symbolizes the power of the human mind to rise above sensible particulars and contingent events to universal and necessary relationships

Mathematics means this not only to mathematicians and philosophers but also to moralists and statesmen The objects of geometrical inquiry writes Alexander Hamilton are so entirely abstracted from those pursuits which stir and put in motion the unruly passions of the human heart that mankind without difficulty adopt not only the more simple theorems of the science but even those abstruse paradoxes which however they may appear susceptible of demonstration are at variance with the natural conceptions which the mind without the aid

of philosophy would be led to entertain upon the subject But in the sciences of morals and politics men are found far less tractable This Hamilton points out is not due merely to the passionate interest in their problems It cannot be pretended he says that the principles of moral and political knowledge have in general the same degree of certainty with those of mathematics

ADMIRATION FOR MATHEMATICS often extends beyond enthusiasm for its exemplary virtues or delight in its intellectual beauty to the recognition of its influence on the whole history of thought Yet here differences of opinion begin to appear

In the ancient world Plato and Aristotle represent opposite estimates of the importance of mathematics for the rest of philosophy For the Platonists Aristotle says mathematics has come to be identical with philosophy though they say that it should be studied for the sake of other things He complains of those students of science who do not listen to a lecturer unless he speaks mathematically They make the error of supposing that the minute accuracy of mathematics is to be demanded in all cases whereas according to Aristotle s own view its method is not that of natural science

In the modern world thinkers who are both mathematicians and philosophers like Descartes and Whitehead represent a return to the Platonic point of view while Kant even more than Aristotle insists that the philosopher is grievously misled if he tries to follow the method of mathematics in his own inquiries Whitehead charges Aristotle with having deposed mathematics from its high role as a formative element in the development of philosophy —a demotion which lasted until with Descartes and others in the 17th century mathematics recovered the importance it had for Plato

Attempting to qualify his own enthusiasm Whitehead admits that he would not go so far as to say that to construct a history of thought without a profound study of the mathematical ideas of successive epochs is like omitting Hamlet from the play which is named after him That would be claiming too much But it is certainly analogous to cutting out the part of Ophelia This simile is singularly exact For Ophelia is quite essential to the play she is very charming—and a little mad Let us grant that the pursuit of mathematics is a divine madness of the human spirit a refuge from the goading urgency of contingent happenings

For Kant the madness lies not in the pursuit of mathematics itself but in the delusion of the philosopher that he can proceed in the same way The science of mathematics Kant writes presents the most brilliant example of how pure reason may successfully enlarge its domain without the aid of experience Such examples are always contagious particularly when the faculty is the same which naturally flatters itself that it will meet with the same success in other cases which it has had in one The expectation naturally arises that the method of mathematics would have the same success outside the field of quantities But philosophers who understand their own task Kant thinks should not be infected by the confidence of those who are masters in the art of mathematics as to their ability of achieving such success by applying its method in other fields

The exactness of mathematics Kant holds depends on definitions axioms and demonstrations None of these can be achieved or imitated by the philosopher in the sense in which they are understood by the mathematician because according to Kant the validity of the mathematician s definitions and demonstrations ultimately depends on the fact that he is able to *construct* the concepts he uses The point is not that mathematics obtains its objects from reason rather than experience but rather that it obtains them from reason by construction as for example Euclid begins by constructing a triangle which corresponds with his definition of that figure

Hence Kant maintains we must not try in philosophy to imitate mathematics by beginning with definitions except it be by the way of experiment In philosophy in fact the definition in its complete clearness ought to conclude rather than begin our work whereas in mathematics we cannot begin until we have constructed the objects corresponding to our definitions It follows from all this Kant concludes that it is not in accordance with the

very nature of philosophy to boast of its dog matical character particularly in the field of pure reason and to deck itself with the titles and ribands of mathematics

Differences of opinion about mathematics represent for the most part philosophical controversy concerning the nature of science or the objects of its knowledge Mathematicians who engage in such controversy assume the role of philosophers in doing so for mathematics itself is not concerned with questions of this sort But there are some questions about mathematics which seem to call for a close study of the science itself and even for proficiency in its subject matter and operations They are questions about the scope of mathematics and about the divisions of the science in relation to one another and to its unity On these issues mathematicians disagree not only with philosophers but among themselves and in their capacity as mathematicians

These issues usually involve different interpretations of the history of mathematics The problem is not one of the origin of mathematics

The ancient opinion found in Herodotus Plato and Aristotle that the mathematical arts especially geometry were first developed by the Egyptians is of interest because of the questions it raises about the circumstances of the origin of mathematics Herodotus seems to suggest that geometry arose as an aid in the practice of surveying land From this practice he says geometry first came to be known in Egypt whence it passed into Greece Aristotle on the other hand separating from the useful arts those which do not aim at utility thinks the latter arose first in the places where men first began to have leisure That is why the mathematical arts were founded in Egypt for there the priestly caste was allowed to be at leisure

The Greek development of mathematics very early distinguishes between the pure sciences of arithmetic and geometry and their useful applications in the arts of measurement The Greeks conceived mathematics as essentially speculative rather than practical or productive They also divorced it from empirical investigation of the sensible world As arithmetic is concerned with numbers not with numbered things and geometry with figures not with physical shapes areas or volumes so Plato points out that music and astronomy belong to the mathematical sciences when they deal not with audible harmonies but with their numerical ratios not with visible celestial motions but with their geometrical configurations

Provoked by Glaucon s interest in the usefulness of the mathematical arts Socrates excludes their utility as being of no interest to the philosopher He recommends arithmetic and its sister disciplines only so far as these sciences entirely ignore the world of sensible things The reason why the philosopher who has to rise out of the sea of change and lay hold of true being must be an arithmetician he explains is that arithmetic can have a very great and elevating effect when it compels the soul to reason about abstract number and rebels against the introduction of visible or tangible objects into the argument In the same way only when it concerns itself with knowledge of the eternal not with measuring earthly distances will geometry draw the soul towards truth and create the spirit of philosophy The astronomer like the geometer should employ problems and let the heavens alone if he would approach the subject in the right way and like the astronomer the student of harmony will work in vain if he compares the sounds and consonances which are heard only and so fails to reach the natural harmonies of number

About the non empirical or non experimental character of mathematics there has been little dispute It is seldom suggested that the growth of mathematical knowledge depends upon improvement in methods of observation But on the relation of mathematics to physics which raises the whole problem of pure and applied mathematics or of mathematical and experimental physics there has been much controversy especially in modern times

Bacon for example adopts the ancient division of mathematics into pure and mixed the former wholly abstracted from matter and physical axioms Though he regards mathematics as a useful instrument in physics— the investigation of nature being best conducted when mathematics are applied to physics —he also insists upon the primacy of physics and

upon its essentially experimental character Physics has been corrupted he says by logic and by mathematics when these seek to dominate instead of to serve it It is a strange fatality that mathematics and logic which ought to be but handmaids to physics should boast their certainty before it and even exercise dominion against it

The certainty and clarity which Hume is willing to attribute to mathematics cannot in his opinion be extended to mathematical physics The most perfect philosophy of the natural kind he thinks only staves off our ignorance a little longer Nor is geometry when taken into the assistance of natural philosophy ever able to remedy this defect or lead us into the knowledge of ultimate causes by all that accuracy of reasoning for which it is so justly celebrated Every part of mixed mathematics Hume continues proceeds upon the assumption that certain laws are established by nature in her operations and abstract reasonings are employed either to assist experience in the discovery of these laws or to determine their influence in particular instances where it depends upon any precise degree of distance or quantity When mixed with physics mathematics remains subordinate—at best an aid in the formulation and the discovery of the laws of nature

A different view seems to be taken by the great mathematicians and physicists of the 17th century Galileo Descartes and Newton tend to make mathematical analysis an integral part of physics As the structure of the world is mathematical so too must the science of nature be mathematical Geometry says Descartes is the science which furnishes a general knowledge of the measurement of all bodies *If we retain the ancient distinction* between geometry and mechanics it can only be in terms of the assumption confirmed by the usage of these names that geometry is precise and exact while mechanics is not

In the preface to his *Mathematical Principles of Natural Philosophy* Newton also says that geometry is founded in mechanical practice and is nothing but that part of universal mechanics which accurately proposes and demonstrates the art of measuring What is called rational mechanics must not be confused with the manual arts of measurement which are imperfect and inexact and it is therefore wrong to distinguish geometry from mechanics as that which is perfectly *accurate from that which is* less so But since the manual arts are chiefly *employed in the moving of bodies it happens* that geometry is commonly referred to their magnitude and mechanics to their motion

Newton himself does not abide by this distinction His aim is to subject all the phenomena of nature to the laws of mathematics and to cultivate mathematics as far as it relates to natural philosophy I offer this work as the mathematical principles of philosophy for the whole burden of philosophy consists in this—from the phenomena of motions to investigate the forces of nature and from these forces to *demonstrate the other phenomena* He regrets that he has not been able to deduce *all* the phenomena of nature by the same kind of reasoning from mechanical principles

Fourier goes even further Mathematical analysis he says is as extensive as *nature itself* Mathematical analysis has necessary relations with sensible phenomena In laying hold of the laws of these phenomena mathematics interprets them by the same language as if to attest the unity and simplicity of the plan of the universe and to make still more evident that unchangeable order which presides over all natural causes Thus much had been said or implied by Descartes and Newton But in addition to all this Fourier from his own experience in developing a mathematical theory of heat comes to the conclusion that profound study of nature is the most fertile source of mathematical discoveries Mathematics itself benefits from its alliance with physics it increases *in analytical power and in the generality of its formulations* as physical inquiries extend the range of phenomena to be analyzed and formulated

THE RELATIONS OF mathematics to physics are considered in the chapters on ASTRONOMY MECHANICS and PHYSICS Mathematical physics must be examined in the light of the opinion that mathematics and physics are *separate* sciences distinct in object and method Further more whereas some of the major contributions to mathematics appear in the great books of

physics or natural philosophy (e g Archimedes Kepler Newton Fourier) even more fundamental formulations of the science occur in great books devoted exclusively to mathematics Euclid s *Elements* (on geometry) Apollonius treatise *On Conic Sections* Nicomachus *Introduction to Arithmetic* Descartes *Geometry* and Pascal s mathematical papers Others belonging to this latter group are listed in the Additional Readings The great modern advances in mathematics are exemplified by the works of Gauss Lobachevski Hamilton Riemann Boole Dedekind Peano Frege Cantor Hilbert

It would be both natural and reasonable to inquire about the relation between the great works of mathematics included in this set and the equally great treatises or monographs listed in the Additional Readings which represent for the most part the contributions of the 19th century But since the major question which immediately confronts us in such an inquiry concerns the relation of modern to ancient mathematics we can examine the problem in terms of the works included in this set for they represent both the continuity and the discontinuity in the tradition of mathematical science

Galileo and Newton are disciples of Euclid and Archimedes Fourier is a disciple of Newton and Descartes But Descartes is the great innovator He seems to be quite self conscious of his radical departure from the ancients and from the state of mathematics as he found it in his own day Yet the truth and power of his mathematical discoveries seem so evident to him that he cannot doubt the ancients must have had some inkling of it

I am quite ready to believe he writes that the greater minds of former ages had some knowledge of it nature even conducting them to it We have sufficient evidence that the ancient Geometricians made use of a certain analysis which they extended to the resolution of all problems though they grudged the secret to posterity At the present day also there flourishes a certain kind of Arithmetic called Algebra which designs to effect when dealing with numbers what the ancients achieved in the matter of figures These two methods he claims are nothing else than the spontaneous fruit sprung from the inborn principles of the discipline here in question

Descartes does not regard his success as consisting in the advance of mathematical truth through discoveries based upon principles or conclusions already established Nor would he even be satisfied to say that his use of algebra in developing analytical geometry created a new branch of mathematics Rather in his own view it tended to unify all existing branches and to form a single universal method of analysis In effect it revolutionized the whole character of mathematics and laid the foundation for the characteristically modern development of that science since his day To speak freely he writes I am convinced that it is a more powerful instrument of knowledge than any other that has been bequeathed to us by human agency as being the source of all others

One need not quite agree with Bertrand Russell that pure mathematics was not discovered until the 19th century in order to perceive that the discoveries made in that century carry out the spirit of the Cartesian revolution If one understands the difference between the universal mathematics of Descartes and the separate sciences of arithmetic and geometry as developed by the ancients if one understands the difference between the theory of equations in Descartes and the theory of proportions in Euclid if one understands how algebraic symbolism replacing numbers by letters frees both arithmetic and geometry from definite quantities then the profound discontinuity between modern and ancient mathematics begins to be discernible

There are other differences contributing to that discontinuity such as the modern treatment of the infinite the invention of the calculus and the theory of functions But what is of prime importance for the purpose of understanding the nature of mathematics its objects and its methods is the perception of the discontinuity in any one or another of its manifestations Here is a fundamental disagreement about the nature of mathematics which is not an issue between philosophers disputing the definition of the science but rather an issue made by the actual work of mathematicians in ancient and modern times

In his *Battle of the Books*—ancient and modern—Swift sees only the great poets and philosophers of the two epochs set against one

another The battle between the ancient and the modern books of mathematics might be as dramatically represented In such affairs there is a natural tendency to prejudge the issue in favor of the modern contender That prejudice has rea on on its side in certain fields of knowledge where the perfection of new instruments and the discovery of new facts work to the advantage of the latecomer But it is questionable whether in this dispute over the nature of mathematics the same advantage prevails

When the issue is fairly explored by an examination of the differences between the great masterpieces of ancient and modern mathematics it may be found impossible to say that truth lies more on one side than on the other or that one conception of mathematics is more fruitful than another because the two versions of the science may seem to be incommensurable in their aims methods and standards of accomplishment

ONE EXAMPLE WILL illustrate this incommensurability The ancient notion of number as may be seen in Nicomachus *Introduction to Arithmet c* limits the variety of numbers A number always numbers a number of things even though we can deal with the number itself apart from any set of numbered things It is always a positive and integral quantity which excepting unity itself the natural starting po nt of all numbers contains a multitude of discrete units

Numbers are classified according to the way in which they are constituted of parts and according to the constitution of these parts The primary divis on of numbers is into even and odd "The even is that which can be divided into two equal parts without a unit intervening in the middle and the odd is that which cannot be divided into two equal parts because of the aforesaid intervention of a unit

The even numbers are capable of subdivision into the even times even the odd times even and the even times odd and the odd into the prime and incomposite the secondary and composite and the number which in itself is secondary and composite but relatively is prime and incompo ite The peculiarit es of these types of number are expl ined in the chapter on QUANTITY There are still further classifications of numbers into superabundant deficient and perfect and of the parts of numbers in relation to the numbers of which they are parts

Finally numbers are considered in terms of their geometrical properties to be observed when their units are disposed discretely in spatial patterns and in one two or three dimensions There are linear plane and solid numbers and among plane numbers for example there are triangular square pentagonal hexagonal numbers and so on

The arithmetic operations of addition subtraction multiplication and division are performed in the production of numbers or in the resolution of numbers into their parts But though any two numbers can be added together or multiplied the inverse operations cannot always be performed A greater number cannot be subtracted from a less for subtraction consists in taking a part from the whole and leaving a positive remainder Since division is the decomposition of a number into its parts a number cannot be divided by one greater than itself for the greater cannot be a part of the less

In short in Nicomachus theory of numbers what later came to be treated as negative numbers and fractions can have no place Nicomachus will not carry out arithmetical operations in all possible directions without regard to the result obtained He refuses to perform these operations when the results which would be obtained do not have for him the requisite mathematical reality He does not find it repugnant to reason that subtraction and division unlike addition and multiplication are not poss ble for any two numbers as for example subtracting a larger from a smaller number or using a divisor which does not go into the dividend evenly and so leaves a fractional remainder On the contrary Nicomachus finds it repugnant to reason to perform these operations in violation of the r proper mean ng and to produce thereby results such as negative quantities and fra tions which are for him not numbers *i e* which cannot number any real thing

Understanding the nature of square numbers Nicomachus would be able to understand a square root but he would not see why the operation of extracting the square root should be

applied to numbers which are not square Hence another kind of modern number the irrational fraction which is generated by such operations as the extraction of the square of positive integers which are not perfect squares would never appear in Nicomachus set of numbers nor would the imaginary number which is the result of applying the same operation to negative quantities

When the arithmetical operations are performed algebraically with unknowns as well as definite quantities the solution of equations requires the employment of terms which Nicomachus would not admit to be numbers—negatives fractions (both rational and irrational) imaginaries and complex numbers which are partly real and partly imaginary Descartes finds nothing repugnant in these novel quantities On the contrary he would find it repugnant not to be able to perform the basic arithmetical operations without restriction Algebra would be impossible and with it the general method of analysis that proceeds in terms of the purely formal structure of equations from which all definite quantities have been excluded It would also be impossible to do what Descartes thinks essential to the unity of mathematics namely to represent geometrical operations algebraically and to perform most algebraic operations geometrically

Geometrical loci cannot be expressed by algebraic formulae or equations unless there are as many numbers as there are points on a line The number series for Nicomachus without fractions and irrationals is neither dense nor continuous There are fewer numbers than there are points on a line. And without the use of zero negative numbers and fractions—none of which would be regarded as numbers by Nicomachus—it would be impossible for Descartes to construct a set of coordinates for the geometrical representation of equations whereby all the points in a plane have their unique numerical equivalents

The Cartesian synthesis of algebra and geometry which in his view vastly increases the power of each violates the ancient distinction between continuous and discontinuous quantities—magnitudes (like lines and planes) and multitudes (or numbers) Euclid for example treats the irrational or the incommensurable always as a relation of magnitudes never of multitudes or numbers for him certain geometrical relationships cannot be expressed numerically Arithmetic and geometry are not even coordinate much less co-extensive sciences Arithmetic is the simpler the more elementary science and is presupposed by geometry

Other examples arising from the innovations of Descartes might be employed to show the chasm between the arithmetic and geometry of the ancients and modern mathematics—such as the treatment of infinite magnitudes and numbers the theory of functions and the method of the calculus But the multiplication of examples does not seem necessary to suggest that there may be no answer to the question Is Descartes right and Nicomachus and Euclid wrong? or to the question Are the modern innovations improvements or corruptions of the mathematical arts and sciences?

These questions are not like questions concerning the truth or falsity of a proposition in mathematics or the validity of a proof A given theorem in Euclid must in the light of his definitions axioms and postulates be either true or false and accordingly Euclid s demonstrations or constructions are either cogent or fallacious The same rules apply to Descartes But whether Euclid s or Descartes conception of the whole mathematical enterprise is right seems to present a choice between disparate worlds a choice to be made by reference to principles and purposes which are themselves not mathematical

Modern mathematics may be much more useful in its physical applications especially in the analysis and calculation of variable motions or quantities It may have a special elegance and simplicity as well as greater unity and even systematic rigor But it may also purchase these qualities at the expense of the kind of intelligibility which seems to characterize ancient mathematics as a result of the insistence that its objects have an immediately recognizable reality Ancient mathematics never occasioned such an extreme remark as that made by Bertrand Russell about modern mathematics—that it is the science in which we never know what we are talking about nor whether what we are saying is true

THE QUESTION OF the reality of the objects of mathematics is in part a problem for the mathematician and in part a question for the philosopher The problem for the mathematician seems to be one of establishing the existence of the objects he defines This can be illustrated by reference to Euclid s *Elements*

The basic principles as Euclid expounds the science seem to be threefold definitions postulates and axioms or common notions The axioms are called common notions because they are truths common to other branches of mathematics as well as to geometry The common notions are called axioms because their truth is supposed to be self evident. In contrast the postulates are peculiar to geometry for they are written as rules of construction. They demand that certain operations be *assumed* possible such as the drawing of a straight line or a circle or the transposition of a figure from one portion of space to another without alteration of its form or quantity

Euclid s definitions include the definition of a straight line and a circle His first two postulates therefore seem to ask us to assume that space is such that these defined geometrical objects exist in it as they are defined or in other words that objects corresponding to the definitions have geometrical reality But there are many definitions—of a triangle of an equilateral triangle of a parallelogram—for which Euclid states no postulate demanding that we assume the geometrical reality of the object defined Hence before he undertakes to demonstrate the properties of these figures, he finds it necessary to prove that they can be constructed Until they are constructed and the construction demonstrated the definitions state only po sib lities to which no geometrical realities are *known* to correspond in the space determined by Eucl d s postulates

In his first constructions Euclid can employ only the definition of the figure itself his axioms and those postulates which permit him to use certain mechanical devices—the straight edge and the compass wh ch are the mechanical equivalents of his postulates that a straight line can be drawn between any two points and a circle described with any radius from any point upon a plane When for example in the first proposition of Book I Euclid thus demonstrates the construction of an equilateral triangle he has proved the geometrical existence of that figure or in other words its reality in the space of his postulates

A number of questions can be asked about this and many other similar demonstrations The postulates being assumptions their truth can be questioned and an effort made to prove or disprove them This type of questioning led to the development of the non Euclidean geometries. After centuries of trying unsuccessfully to prove Euclid s postulate about parallel lines geometers like Lobachevski and Riemann postulated other conditions concerning parallels with consequences for the properties of other geometrical figures

The interior angles of a Euclidean triangle for example equal the sum of two right angles in certain non Euclidean triangles they add up to more or less than two rights One interpretation of this situation is that the truth of conclusions in geometry is entirely dependent on arbitrary assumptions Another is that the several variants of the parallel postulate indicate the selection of different spaces in which to construct figures and under each set of spatial conditions postulated there is only one body of geometrical truths concerning the properties of the figures therein constructed

Another type of question concerns the logical as opposed to the geometrical conditions of geometrical proof In his essay *On Geometrical Demonstration* Pascal declares the geometric method to be the most perfect available to men for it consists not in defining or in proving everything nor in defining or proving nothing but in maintaining itself in the middleground of not defining things which are clear to all men and in defining all others and not proving everything known to men but in proving all the other things This method it seems is not restricted to the subject matter of geometry to Descartes and Spinoza at least it seems to be the method for demonstrating any theoretical truth Descartes presents arguments demonstrating the existence of God and the distinction between soul and body drawn up in geometrical fashion and as its title page indicates the whole of Spinoza s *Ethics* is set forth in geometrical order

It may be questioned wh

which Descartes adds to his definitions and axioms or those which Spinoza introduces beginning with Proposition 13 of Book II function as postulates do in geometry i e as rules of construction it may similarly be questioned whether Spinoza is following the geometrical method in Book I where he proceeds without any postulates at all But the more general question concerns the criteria for testing the consistency and the adequacy of the primitive propositions—the definitions axioms postulates—laid down as the foundation for all that is to be demonstrated The investigation of this problem calls for an examination of the whole process of proof from which has developed the modern theory of mathematical logic that challenges the universality and adequacy of the *traditional logic of Aristotle* and asserts that mathematics and logic are continuous with one *another—essentially the same discipline*

The issues raised by mathematical logic or the logic of mathematics are considered in the chapters on Hypothesis Logic and Reasoning Here we must turn finally to one other question which is of interest principally to the philosopher rather than the mathematician It concerns the objects of mathematics It is a question about their reality or mode of existence which cannot be answered by the mathematical proof of a construction

When for example Euclid constructs an equilateral triangle the figure established cannot be the one imperfectly drawn upon paper *The postulated permission to use a ruler and* compass does not remove the imperfection of these mechanical instruments or the *inaccuracy* in their physical use The triangle whose properties the geometer tries to demonstrate must be perfect as no actually drawn figure can be The philosophical question therefore concerns the reality or existence of this ideal perfect figure The same question can be asked about pure numbers—numbers apart from all numbered things

Are the objects of mathematics purely intelligible beings existing apart from the sensible world of material things? *Or are they ideal entities*—not in the sense of existing outside the mind but in the sense of being ideas in the mind itself rather than perceptible particulars? As indicated in the chapters on Being Form and Idea Plato and Aristotle seem to answer these questions differently But there are further differences among those who regard mathematical objects as having being only in the mind

Aristotle Aquinas Locke and James for example think of the objects of mathematics as universals formed by abstraction from the particulars of sense and imagination The mathematicals such as numbers and figures Aquinas writes do not subsist as separate beings Apart from numbered things and physical configurations numbers and figures have a separate existence only in the reason in so far as they are abstracted from motion and matter Hobbes Berkeley and Hume on the other hand deny abstract ideas or universal concepts Let any man try to conceive a triangle in general Hume declares which is neither *isosceles* nor *scalenum* nor has any particular length or proportion of sides and he will soon perceive the absurdity of all the scholastic notions with regard to abstraction and general ideas

Despite these differences there seems to be general agreement in the tradition of the great books that the truths of mathematics are rational rather than empirical or in the language of Kant and James *a priori* rather than *a posteriori* But the meaning of this agreement is not the same for those who think that truth in mathematics does not differ from truth in other sciences and those who think that mathe*matical truths stand alone precisely because* they are not about matters of fact or real existence

Plato for whom all science is knowledge of purely intelligible objects regards the mathematical sciences as inferior to dialectic in the knowledge of such objects because they start from hypotheses and do not ascend to principles The students of such sciences Plato writes assume the odd and the even and the figures and three kinds of angles and the like in their several branches of science these are their hypotheses which they and everybody are supposed to know and therefore they do *not deign to give any account* of them either to themselves or others but they begin with them and go on until they arrive at last and in a consistent manner at their conclusion

For Aristotle what differentiates mathe matics from physics and metaphysics is the special character of its objects Physics and metaphysics both deal with substances as they exist outside the mind whereas the objects of mathematics are abstractions Though figures and numbers are inseparable in fact from material substances they are separable from any particular kind of body by an effort of abstraction This does not deny for example that physical things have perceptible figures It merely insists that the geometer does not treat figures *as* sensible but *as* intelligible that is as abstracted from matter Nevertheless the truths of mathematics no less than those of physics and metaphysics apply to reality All three sciences are further alike in demonstrat in their conclusions rationally rather than by experiment All three employ induction to ob tain their principles though metaphysics alone attains to the first principles of all science

For Kant mathematical cognition is cogni tion by means of the *construction* of concep tions To explain this he cites the example of the construction of a triangle I construct a triangle by the presentation of the object which corresponds to this conception either by mere imagination (in pure intuition) or upon paper (in empirical intuition) in both cases completely *a priori* without borrowing the type of that figure from any experience We keep our eye merely on the act of the con struction of the conception and pay no atten tion to the various modes of determining it for example its size the length of its sides the size of its angles The *a priori* character of such in tuitions on which rests the *a pr o i* character of mathematical truths does not mean that math ematics has no relevance to experience Arith metic and geometry are like physics according to Kant they are sciences of experience or nature but like pure (as opposed to empirical) physics they are *a pr o i* sciences Since Kant holds that experience itself is constituted by *a prior* forms of perception he can ascribe the validity which mathematics has for all possible experience to the *a priori* intuition of the pure forms of phenomena—space and time

Bertrand Russell rejects this Kantian view which [asserts] that mathematical reasoning is not strictly formal but always uses intuitions *i e* the *a priori* knowledge of space and time Thanks to the progress of Symbolic Logic this part of the Kantian philosophy Russell holds is now capable of a final and irrevocable refutation. Leibnitz before Kant had advo cated the general doctrine that all mathemat ics is a deduction from logical principles but according to Russell he had failed to substanti ate this insight partly because of his belief in the logical necessity of Euclidean geometry The same belief is in Russell s opinion the cause of Kant s error The actual propositions of Euclid do not follow from the principles of logic alone and the perception of this fact he thinks led Kant to his innovations in the theory of knowledge But since the growth of non Euclidean geometry it has appeared that pure mathematics has no concern with the question whether the axioms and propositions of Euclid hold of actual space or not

Russell asserts that by the help of ten prin ciples of deduction and ten other premises of a general logical nature (*e g* implication is a relation) all mathematics can be strictly and formally deduced He regards the fact that all Mathematics is Symbolic Logic as one of the greatest discoveries of our age and when this fact has been established the remainder of the principles of Mathematics consists in the analysis of Symbolic Logic itself Though this view of mathematics may not be worked out in detail except in such treatises as Russell s *Principles of Mathemat cs* and in the *Principia Mathematica* on which he collaborated with Whitehead the conception of mathematics as a purely formal science analogous to (if not identical with) logic does have some anticipa tions in the great books For James as for Locke and Hume mathematics is strictly a science of the relations between ideas not of real existences As regards mathematical judg ments James writes they are all rational propositions for they express results of com parison and nothing more The mathemat cal sciences deal with similarities and equalities ex clusively and not with coexistences and se quences Both James and Locke however differ from Hume in thinking that there are sciences other than those of number and quan tity which can demonstrate their conclusions with certitude

The foregoing discussion indicates *some* of the differences among philosophers concerning the objects of mathematics the conditions of *its truth and its relation to other sciences* These disagreements do not seem to take the form of an opposition between ancient and modern thought like that between ancient and modern mathematicians concerning the nature of their science The two oppositions do not run parallel to one another

On the contrary the objections which modern philosophers especially Berkeley Hume and Kant raise against the notion of infinite quantities seem to favor the ancient rather than *the modern tenor of mathematical thought* Though the reasons they give do not derive from the same principles as those to which Plato and Aristotle appeal they like the ancients appear to insist upon a certain type of intelligibility in the objects of mathematics which seems to have been sacrificed in the mathematical development initiated by Descartes

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use th numbers *in* heavy type which are the volume and page *numbers of the passages referred* to For example in **4** HOMER *Iliad* BK II [265 283] **12d** the number **4** is the number of the volume in the set the number **12d** indicates that the pas sage is in section d of page 12

PAGE SECTIONS When the text is printed in on column th letters a and b refer to the upper and lower halves of th page For example in **53** JA IES *Psychology* **116a 119b** the passage be ins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand s de of the page For example in **7** PLATO *Symp sium* **163b-164c** the passage beg ns in the lower half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One or more of the *main divisions* of a work (such as PART BK CH SECT) are sometimes included in the reference line numbers in brackets are given in cer tain cases *e g* *Il ad* BK II [265 83] **12d**

B BLE REFERENCES The references are to book chapter and verse When the King James and Douay versions differ *in title of books or in the numbering of chapters or verses* the King James version is cited first and the Douay indicated by a *(D)* follows *e g* OLD TESTA MENT *Nehem ah* 45—*(D) II Esdras* 7 46

SYMBOLS The abbreviation esp calls the reade s attention to one or more especially relevant parts of a whole reference *passim* s gnifies that the *topic is discussed inte mit* tently rather than continuously in the work or passage cited

For additional information concerning the style of the ref rences see the Explanation of Reference St le for general guidance in the use of *The G eat Ideas* consult the Preface

1 The science of mathematics its branches or di isions the or gin and development of mathemat cs

5 AES HYLUS *Prometheus Bound* [442 472] **44c d** esp [459-460] **44d**

6 HERODOTU *H t ry* BK II **70b-c**

7 PLATO *Charm d s* **7d 8a** / *Phaedrus* **138c d** / *Gorgias* **254a-c** / *Republ* BK VI **391b-397a** / *T maeus* **451b c** / *Statesman* **581a** / *Ph lebus* **633b 634b**

8 ARISTOTLE *P ster or An lytics* BK I CH 7 **103c d** CH 27 **119b** / *Metaphysics* BK I CH I [981ᵇ13 24] **500a** CH 9 [992ᵃ29-34] **510c** BK II CH 3 **513c d**

11 NICOMACHUS *Arithmetic* BK I **812b 813d** BK II **831d-832a**

16 PTOLEMY *Almag st* BK I **5a 6a**

16 COPERNICUS *Revolutions f the Heavenly Spheres* BK I **510a b**

17 PLOTINUS *F fth En ead* TR IX CH II **250c d**

18 AU U TINE *Christ an Doctrine* BK II CH 38 **654b-c**

19 AQUINAS *Summ Theolog a* P RT I II Q 35 A 8 ANS **779c 780c**

23 HOBBE *Leviathan* PART I **72a d** ART IV **268c d 269b**

30 BACON *Advancement of Learn g* **46a-c**

31 DESCARTES *Rules* IV **5c d 6c 7c** XIV **31c 32a** / *Disc urse* PART I **43b-c** PART II **47b d**

31 S INOZA *Ethics* PART I APPENDIX **370b-c**

34 NEWTON *Principles* **1a b**

35 LOCKE *Human Understanding* BK IV CH XII SECT 7 **360b-c** SECT 15 **363a b**

35 HUME *Human Understand ng* SECT IV DIV 20 **458b** SECT VII DIV 48 **470d 471c** SECT XII DIV 131 **508d 509a**

41 G BBON *D l ne and Fall* **290a 299b**

42 KANT *Pu e Reas n* **5d 6b 17d 18d 46a c 68a-69c** esp **68 69a 211c 218d** / *P actual Reason* **295b d 330d 331a** / *Judgement* **553d** [fn 1]

46 HEGEL *Philo ophy of Right* ADDITIONS 40 **122d 123b** / *Ph losophy of History* PART I **219a**

53 JAMES *Psychology* **874a 878a**

1a The dist nction of mathematics from phys ics and metaphysics its relat on to logic

7 PLATO *Euthydemus* **75b** / *Republic* BK VI **386d 388a** BK VII **391b 398c**

8 ARI TOTLE *P sterı r Analytics* BK I CH 12 [77ᵇ27 34] **107a** [78 10-13] **107b-c** / *Physics* BK II CH 2 [193ᵇ 2 194 11] **270a-c** CH 9 [200 15 29] **277c-d** / *H aven* BK I CH 10 [279ᵇ32 280ᵃ11] **371b-c** / *Metaphysic* BK I

(1a *The science of mathematics: its branches or divisions; the origin and development of mathematics.* 1a *The distinction of mathematics from physics and metaphysics: its relation to logic.*)

CH 8 [989^b29-990^a8] 508a; CH 9 [992^a29-^b9] 510c-d / BK II, CH 3 [995^a15-20] 513d / BK III, CH 2 [996^a21-36] 514d-515a / BK IV, CH 1 522a / BK VI, CH 1 547b-d; 548c / BK XI, CH 4 [1061^b15-21] 587c-d; CH 3 [1061^a29-^b12] 589c-d; CH 4 589d-590a; CH 7 592b-593a / BK XII, CH 8 [1073^b1-7] 603d / *Soul*, BK I, CH 1 [403^b10-16] 632d

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23 HOBBES: *Leviathan*, PART I, 56b-57a; 58a-c; 59b-c; 72a-d; PART IV, 267a-b; 268c-269a

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33 PASCAL: *Geometrical Demonstration*, 445a-b

34 NEWTON: *Principles*, 1a-2a

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1b The service of mathematics to dialectic and philosophy: its place in liberal education

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28 GALILEO: *Two New Sciences*, SECOND DAY 190b-c

30 BACON: *Advancement of Learning*, 16a-b; 46a-c

31 DESCARTES: *Rules*, II, 2a-3b; IV, 5a-7d; XIV, 29a-b / *Discourse*, PART I, 43b-c; PART II, 46c-48b / *Geometry*, BK I, 297a-b

31 SPINOZA: *Ethics*, PART I, APPENDIX 370b-c

33 PASCAL: *Pensées*, 1-2 171a-172b / *Geometrical Demonstration*, 442a-446b

34 NEWTON: *Principles*, 1b-2a

36 SWIFT: *Gulliver*, PART III, 97a-b

42 KANT: *Pure Reason*, 15c-16c; 46a-c; 211c-218d esp 215a-c / *Judgement*, 551a-552c

51 TOLSTOY: *War and Peace*, BK I, 47b-48d

53 JAMES: *Psychology*, 882a-883a

1c The certainty and exactitude of mathematical knowledge: the a priori foundations of arithmetic and geometry

7 PLATO: *Philebus*, 633b-634b

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 27 119b / *Metaphysics*, BK I, CH 2 [982^a25-28] 500c; BK II, CH 3 513c-d; BK XIII, CH 3 609a-610a

9 ARISTOTLE: *Ethics*, BK I, CH 3 [1094^b12-28] 339d-340a

11 NICOMACHUS: *Arithmetic*, BK I, 811a-814b

16 PTOLEMY: *Almagest*, BK I, 5b-6a

23 HOBBES: *Leviathan*, PART I, 56b; 59b-c; PART IV, 268c-d; 269b

28 GALILEO: *Two New Sciences*, FOURTH DAY 252a-b

30 BACON: *Advancement of Learning*, 61b-c; 65b / *Novum Organum*, BK I, APH 1-59 112b-c

31 DESCARTES: *Rules*, I, 2a-3b; IV, 5a-7d / *Discourse*, PART I, 43b-c; PART II, 47b-c; PART IV, 52d-53a; PART V, 54c / *Meditations*, I, 76b-c; V, 93a-95b / *Objections and Replies*, 128a-129a / *Geometry*, BK II, 304a-b

31 SPINOZA: *Ethics*, PART I, APPENDIX 370b

33 PASCAL: *Pensées*, 1-2 171a-172b; 33 176b / *Geometrical Demonstration*, 430a-434; 442a-446b

35 LOCKE *Human Understanding* BK IV CH II SECT 9-10 311b-c CH III SECT 18 20 317d 319c passim SECT 29 322c 323a CH IV SECT 6-9 325a 326b CH XII SECT 1-8 358c 360c passim esp SECT 7 360b-c CH XIII SECT 3 364a

35 BERKELEY *Human Knowledge* SECT 118 436b-c

35 HUME *Human Understanding* SECT IV DIV 20 458a b SECT VII DIV 48 470d-471c SECT XI DIV 131 508d 509a

36 SWIFT *Gulliver* PART III 118b-119a

42 KANT *Pure Reason* 5a 8d 15c 16c 31b d 35b 36a 46a b 68a 69c 86b-c 110a 211c 218d / *Practical Reason* 295b d 312c d 330d 331a / *Pref Metaphysical Elements of Ethics* 376c d / *Science of Right* 399a b / *Judgement* 551a 552a

43 FEDERALIST NUMBER 31 103c 104a NUMBER 85 257d 258d

43 MILL *Liberty* 283d 284b / *Utilitarianism* 445b-c

45 LAVOISIER *Elements of Chemistry* PREF 1a 2b

45 FOURIER *Theory of Heat* 173a b

53 JAMES *Psychology* 175a 176a 874a 878a 879b 882a

1d The ideal of a universal mathesis the unification of arithmetic and geometry

7 PLATO *Meno* 180d 182 / *Theaetetus* 515a-c

8 ARISTOTLE *Categories* c 6 [4^b20-5 14] 9a-c / *Posterior Analytics* BK I CH 7 103c d / *Metaphysics* BK II CH 3 513c d BK VI CH 1 [1026 18 27] 548b BK XI CH 7 [1064^b6-9] 592d 593a BK XIII CH 2 [1077^b9-10] 608b CH 3 [1077^b17 23] 609a

11 EUCLID *Elements* BK II 30a-40b BK V 81a 98b BK VII DEFINITIONS 16-19 127b

11 NICOMACHUS *Arithmetic* BK II 831d 841c

16 KEPLER *Harmonies of the World* 1012b 1014b

23 HOBBES *Leviathan* PART I 58a-c

31 DESCARTES *Rules* 1a-40a c esp II 2d 3b IV 5a 7d VI 8a 10a XIV XXI 28a-40a c / *Discourse* PART I 46c-48b PART II 50d / *Geometry* 295a 353b esp BK 295a 298b

33 PASCAL *Arithmetical Triangle* 447a-456a

36 SWIFT *Gulliver* PART II 109b 111a

42 KANT *Pure Reason* 68a 69

45 FOURIER *Theory of Heat* 172a 173b

2 The objects of mathematics number figure extension, relation order

7 PLATO *Charmides* 7d 8a / *Meno* 176d 177a 180b-183 / *Republic* BK VI 387b c BK VII 393d / *Philebus* 633d

8 ARISTOTLE *Categories* CH 6 9a 11a CH 8 [10 11 16] 15a b / *Physics* BK IV CH 11 [219^b5 8] 299b / *Metaphysics* BK I CH 1 [996 13 15] 514c CH 5 520c 521b passim BK VII CH 2 [1028^b18-28] 551a b BK XI CH 3 [1061^a29-^{b}4] 589c

9 ARISTOTLE *Rhetoric* BK I CH 2 [1355^b26-32] 595b

11 EUCLID *Elements* BK I DEFINITIONS 1a 2a BK VII DEFINITIONS 1 2 127a BK XI DEFINITIONS 1 301a

11 NICOMACHUS *Arithmetic* BK I 811d 812b

16 PTOLEMY *Almagest* BK I 5a b

18 AUGUSTINE *Christian Doctrine* BK II CH 38 654b-c

19 AQUINAS *Summa Theologica* PART I Q 7 A 3 ANS 32c 33c A 4 ANS 33d 34c Q 30 A 1 REP 4 167a 168a Q 85 A 1 REP 2 451c-453c

23 HOBBES *Leviathan* PART I 72a d

30 BACON *Advancement of Learning* 46a-c

31 DESCARTES *Rules* II 3a b IV 7a b VI 8a 10a XIV 30d 33b / *Discourse* PART II 47b-d PART IV 52d 53a / *Meditations* I 76b-c / *Objections and Replies* 217b d / *Geometry* BK II 304a 306a 316a b

34 NEWTON *Principles* 1a b

35 LOCKE *Human Understanding* BK II CH XII SECT 3-5 147d 148b

35 BERKELEY *Human Knowledge* SECT 118 132 436b-439c

35 HUME *Human Understanding* SECT XII DIV 131 508d 509a

42 KANT *Pure Reason* 46a-c 62a d 68a 69c 211c 213a

53 JAMES *Psychology* 874a 878a esp 874a

2a The apprehension of mathematical objects by intuition abstraction imagination construction the forms of time and space

7 PLATO *Meno* 180b-183c / *Republic* BK VI 387b d BK VII 393a 394a / *Theaetetus* 535b-c

8 ARISTOTLE *Posterior Analytics* BK I CH 18 111b-c / *Metaphysics* BK IX CH 9 [1051 23 33] 577b c BK XI CH 3 609a 610a / *Memory and Reminiscence* CH 2 [452^b7 23] 694b-d

9 ARISTOTLE *Ethics* BK III CH 3 [1112^b20-24] 358d BK VI CH 8 [1142 13 19] 391b

11 EUCLID *Elements* BK I POSTULATES 1 3 2a

19 AQUINAS *Summa Theologica* PART I Q 1 A 1 REP 3b-4a Q 85 A 1 REP 2 451c-453c

31 DESCARTES *Rules* XIV XV 28a 33d / *Discourse* PART I 46d / *Meditations* V 93a d VI 96b d / *Objections and Replies* 217b d 218c 228c d

33 PASCAL *Pensées* 1 2 171a 172b

35 LOCKE *Human Understanding* BK I CH I SECT 16 99b-c BK II CH XIII SECT 5-6 149b d c XVI 165c 167c passim

35 BERKELEY *Human Knowledge* INTRO SECT 15 16 409a d SECT 12 13 415b c SECT 18 122 436b-437c

35 HUME *Human Understanding* SECT X DIV 122 505 d DIV 124 125 506a 507a esp DIV 125 507b [fn 1]

42 KANT *Pure Reason* 16a-c 17d 18d 24d 25b 31b-d 35b 36a 46a-c 55 56a 62a d 68a 69c 86b c 87b-c 110a 211c 212a / *Practical*

(2 *The obj cts of mathemat s number figure extens or relat on order 2a The appr be s on of mathematical object by ntu t on abstra t n imag at on construct on the forms of t me and space*)

Reason 295b d / *Sc ence of Right* 399a / *Judgement* 551a 553c

52 Dostoevsky *B others Ka ama ov* bk v 121a b

53 James *P ychology* 302a 304b 549a 552a esp 552b [fn 1] 869a 870a 874b 878a passim

2b The being of mathematical objects their real ide l or mental existence

7 Plato *Phaedo* 228b 230c 242c 243c / *R publ c* bk vi 387b c bk vii 391b 398c / *Theaetetus* 535b c 541b d / *Sophist* 562c / *P lebus* 636b c / *Sev nth Letter* 809c 810b

8 Aristotle *P or Analytic* bk i ch 41 [49^b32 37] 68c / *Posterior Analyt cs* bk i ch 10 [76^b39-77 3] 105d ch 13 [79 6 10] 108c ch 18 [81 40-^{b}5] 111b c / *Top* bk vi ch 6 [143^b11 33] 197b c / *Phy ics* bk ii ch 2 [193^b23 194 11] 270a c bk iii ch 5 [204 8 34] 282a b bk iv ch 1 [2 8^b19 24] 287b-c ch 11 [219^b5-8] 299b ch 14 [223 21 29] 303a / *Hea en* bk iii ch 1 [299 1 300 19] 390b 391c ch 7 [306 1 ^{b}2] 397b d / *Metaphy c* bk i ch 5 [985^b22 986 21] 503d 504b ch 6 [987^b10 34] 505c 506a ch 8 [989^b29-990 32] 508a c ch 9 [991^b 9-992^b18] 509d 511a bk iii ch 1 [995^b 3 18] 514a [996 3 15] 514c ch 2 [996 22 36] 514d 515a [997^b12-998 9] 516b-d ch 5 [1001^b26]-ch 6 [100 ^{b}25] 520 521c bk vii ch 2 [1028^b18 28] 551a b ch 10 [1035^b 32 1036 12] 559b-c ch 11 [1036^b32 1037^a4] 560b c bk xi ch 1 [1059^b2 13] 587b c c 2 [1060 36-^{b}19] 588c d ch 3 [1061^a29-^{b}4] 589c bk xii ch 1 [1069 30-37] 598b bk xii ch 10 [1075^b25]-bk xiii ch 3 [1078^b5] 606 610a bk xiii ch 6-9 611d 618c bk xiv 619b d 626d / *S ul* bk iii ch 7 [431^b13 19] 664b

9 Ari totle *Eth s* bk i ch 6 [096 17 19] 341b bk vi c 8 [1142 13 19] 391b

11 Euclid *Elements* k i postulates 1 3 2a

11 Nicomachus *A thm t c* bk i 811a 812a 813d 814b

18 Augustine *Conf ssion* bk x par 19 76a b / *Chr t an Doct ine* bk ii ch 38 654b c

19 Aquinas *Summa Theol gica* part i q 5 a 3 rep 4 25a d q 10 a 6 ans 45 46d q 11 a 2 rep 1 46d-47d a 3 rep 2 49a-c q 3 a 1 rep 4 167a 168a q 44 a 1 rep 3 238b 239a q 85 a 1 rep 2 451c 453c

20 Aquin s *Summa Theolog a* part 1 q 7 a 1 rep 1 754c 755c part iii sup l q 83 a 2 ans 976c 978c a 3 rep 2 978c 980d

31 Descartes *Rul s* xiv 30b 32a / *D cou e* part iv 52d 53a / *M tat ons* 1 76b c v 93a d 96a / *Obj ctions and Repl* 169c 170a 217b d 218c 228c 229a

31 Spinoza *Ethics* part i appendix 370b c

33 Pascal *Vacuum* 373a b

35 Locke *Human U ders and ng* bk i ch iii sect 6 113c d bk iii ch iii sect 19 259c 260a bk iv ch iv sect 5 8 324d 325c

35 Berkeley *H man Knowledge* intro sect 12 16 408a 409d sect 12 13 415b c sect 118 128 436b 438d passim esp sect 121 122 436d 437c sect 12 126 438a c

35 Hume *Human Unders and ng* sect iv div 20 458a b sect xii div 122 505c d div 1 4 1 5 506a 507a esp div 125 507b [fn 1]

42 Kant *P r Reason* 16a c 24a 33d esp 31d 32c 35b 36a 46a c 62a d 87b c 91c d 94b 95a 211c 213a esp 211c 212a / *P actical Re son* 295b d 312c d / *Ju dgement* 551a 553c

45 Fourier *Theory of H at* 183a b

53 Jame *P ych logy* 874a 878a esp 875a 876b 880b 881a

2c K nds of quantity cont nuous and discrete quantities the problem of the irrational

7 Plato *Meno* 180d 181c / *R pu bl c* bk viii 403a d / *Parmen d* 499d 500c / *Theaet ut* 515a c

8 Aristotle *Categor s* ch 5 [3^b32 4 9] 8a b ch 6 [4^b23 5 14] 9a c ch 8 [10^b26-11 14] 15d 16b / *Phys s* bk iv ch 4 [211 29 ^{b}4] 290c c 1 5 [212^b3 6] 291d bk v ch 3 [227 10 34] 307d 308b bk vi ch 1 2 312b d 315d / *Hea ens* bk i ch 1 [268 6 11] 359a bk iii c 1 [299 300 19] 390b 391c ch 7 [3 6 26-^{b}2] 397c d ch 8 [306^b17 26] 398a / *G ne at on and C ption* bk i ch 2 [315^b25 317^a17] 411b 413a bk ii ch 10 [33 2 34] 439b c / *Metaphy ic* bk i c 2 [983 11 20] 501b-c bk 1 ch 2 [994^b23 26] 513a bk iii ch 4 [1 01^b7 25] 520b c bk v c 6 [1015^b35 1016 17] 536b c [016^b6 32] 537a b ch 13 [102 9 14] 541b bk vi ch 3 [1043^b33 1044 14] 568b d bk x ch 1 [1052 15 37] 578b d ch 3 [1054 20 29] 581a bk xi ch 12 [1068^b26-1069 18] 597d 598a c bk xiv ch 1 [087^b34 1088 14] 620a b

11 Euclid *Elem nts* bk v definitions 4-5 81a bk vii de initions 2 127a 20 127b bk x 191a 300a esp rop 1 191b 192a

11 Archimedes *Sphere and Cyl nder* bk i as u ptions 5 404b / *Sp al* 484b / *Quad a e of th Pa abola* 527a b

11 Ni omac hus *A thm t c* bk i 811d 812a

17 Plotinu *S und Ennead* tr iv c 1 7 52c / *Fo th Ennead* tr ii ch 1 139d / *Sixth En nead* tr i c 1 4 253b 254b tr iii c 1 13 287d 288a ch 15 289a c

19 Aquinas *Sum na Theol g ca* part i q 3 a 1 rep 1 14b 15b q 7 a 3 rep 3 4 32 33c a 4 an 33d 34c q 11 a 2 r p 2 47d-48d q 3 a 3 n 169b 170c q 42 a 1 re 1 224b-225d q 48 a 4 rep 3 252a 263a q 53 1 278d 279b

20 Aqu as *S mma Th l gica* part ii ii

Q 4 A 4 REP 1 491d-492b PART III Q 7 A 12 REP 1 754c 755c
28 GALILEO Two New Sciences FIRST DAY 139c 153a passim THIRD D Y 201a 202a
31 DESCARTES Discourse PART IV 52d 53a / Meditatio 1 93b
31 S I OZA Ethics PART I PROP 15 SCHOL 360b-361d
33 PASCAL Geometrical Demonstration 434a 439b
34 NEW ON Principles BK I LEMMA I 25a LEMMA I SCHOL 31a 32
35 LOCKE Hum Understa d ng BK II, CH XV SECT 9 164b d CH XVI SECT 3 4 165d 166b
35 BERKELEY Human Knowledg SECT 123 132 437 -439c
42 KANT Pure Reason 66d 72c 124d 125b 135a 137a c 152a d 161d 163a
51 TOLSTOY War and Peace BK XI 469a d

3 Method in mathematics the model of mathem tical thought

7 PLATO Meno 179d 183a / Republic BK VI 387b-d / Thea tetus 515b-c
8 ARISTOTLE Prior Analyt cs BK I CH 41 [49^b 32-50 4] 68c / Posteri r Analyt cs BK I CH 10 104d 105d / Phys cs BK II CH 9 [200 15 29] 277 d / M taphysics BK III CH 2 [996^a22 36] 514d 515a BK IX CH 9 [1051^a22 34] 577b-c K XI CH 3 [1061^a29-^{b}4] 589 BK XIII CH 3 609a 610a
9 ARISTOTLE Eth cs K III C I 3 [1112^b20-24] 358d
11 ARCHIMEDES Method 569a 592a esp 569b-570a
23 H B ES Leviath n ART I 56b 58a c 59b c
28 GAL L O Two N w Sciences FOURTH DAY 252a b
30 B ON Adv ncement f Le ning 65b / N um O gan um BK I APH 59 112b-c
31 DESCART S Rul 1a-40 p I 2a 3b v 5c 7d XIV-XXI 28a 40a c / Disco r s PART II 46c-48b / M d t tio 73a / Object ons and Replies 128a 129a / G omet y 295a 353b esp BK I 295 298b BK 304a 306a 316a 317a K I I 331b 353a
31 SP OZA Eth s ART I A PEND X 370b-c
33 PA CAL Pen s 1-3 171 172b / G metri al Dem str ti n 430a-434a 442a-446b / A h met cal Tri gle 451b-452 458b-459b 464a 466
34 N WTON Pr ciple BK I L MMA 2 and SCHOL 168a 170a
35 LOCKE H m n Understa d ng BK IV CH II SECT 9-10 311b c CH I S T 8 20 317d 319c pass m ECT 29-30 322 3 3 passim CH V SE T 6-9 325a 326b CH VII S CT I 340c 341 CH X CT I-8 358 360c p m SECT 14 5 362d 363b CH XV S C I 378b
35 BERK LEY H m K ledg INTRO SE T 12 408a b S CT 19 410c S CT 8 132 436b-439c pass m
35 HU IE Human Understandi g SECT IV DIV 20 458a b SECT VII DIV 48 470d 471c SECT XII DIV 131 508d 509a
36 S IFT Gulliver PART III 118b-119a
42 KANT Pure Reason 5a 8d 17d 18d 46a b 211c 218d / Pract cal Reason 302d 303b 330d 331a / Science of Right 399a b
43 MILL Liberty 283d 284a
45 LAVOISIER Elements of Chemistry PREF 2b
45 FOURIER Theory of Heat 172a 173b
51 TOLSTOY War and Peace BK XI 469a d EPILOGUE II 69 b-c
53 J IES Psychology 175a 176a 874a 878a

3a The cond tions and character of demonstra tion in m themat cs the use of defini tions postul tes axioms hypotheses

7 PLATO Meno 183b-c / Republic BK VI 386d 388a BK VII 397c d
8 ARISTOTLE Prior Analytics BK I CH 41 [49^b 3 37] 68c / Posterio Analytics BK I CH I [71 I 16] 97a b CH 2 [72 22 24] 98d I 5 101b 102b CH 10 104d 105d CH 12 106c 107c CH 23 [84^b6-9] 115b-c CH 24 [85 20-31] 116b-c [85^b4 14] 116d 117a [86^a22 30] 117d 118a CH 31 [87^b33 39] 120a BK II CH 3 [91 I 5] 124b CH 7 [9 ^{b}1 25] 126c d CH 9 [93^b21-25] 128a b / Topics BK I CH I [101 5 17] 143c d BK V CH 4 [32 32-34] 183b K VI CH 4 [14 ^{b}3 22] 194d 195a BK VII CH 3 [153^a6-11] 208a b BK III CH I [157^a1-3] 213a C I 3 [58^b29 159 1] 215c / Sophist cal Refut tions CH 11 [17 ^{b}12 18] 236b [71^b34 172^a7] 236d / Physics K II CH 9 [200 15 29] 277c d / He ens BK III CH 4 [30^b27 31] 394a / Metaphys s BK III CH 2 [996^a21 36] 514d 515a [996^b18 1] 515b CH 3 [998^a25 27] 517 BK V CH 3 [1014 36-^{b}1] 534c BK V CH 10 [1036^a2 13] 559b-c BK XI CH 3 [1061 29 ^{b}4] 589c CH 4 [1061^b17 25] 589d 590a CH 7 [1063^b36-1064 9] 592b BK XI CH 2 [107^b1]-CH 3 [1078 32] 608d 609d BK XIV CH 2 [1089^a22 26] 621 d
9 ARISTOTLE Gener tion f Animals BK I CH 6 [742^b23-33] 283d 284a / Eth cs BK VI CH 8 [15 15-19] 402a
11 EUCL D Elements 1a 396b p BK I DEFINI TION -COMM ON NOTIONS 1a 2a
11 A CHI ED Sphere d Cyl nder BK I DEFI NITIONS A SUMPTION 404a b / Spi als 484b / Quad atur of the Parabola 527 b / Method 569b 570 RO I 571a 572b esp 572b
19 AQU N Summa The l gica PA T I Q 85 A 8 RE 2 460b-461b
23 HOBBES Let th n PART 56b 58a c 59b c
28 GIL ERT Loadst PRE 1b c
28 G LI O Two N w Sci ces FOURT I DAY 252a b
31 DE CAR s Rul s II 3a X V-XX 28a-40 c / D s u se PART I 43b c PART I 46d 47b c PART IV 52d 53a / M d tat ns 70b d 73

(3 *Method in mathematics the model of mathematical thought 3a The conditions and character of demonstration in mathematics the use of definitions postulates axioms hypotheses*)

v 93a d / *Objections and Replies* 128a d / *Geometry* BK II 304a b 316a b BK III 353a
33 PASCAL *Pensées* 1–5 171a 173a / *Vacuum* 365b 366a 373a b / *Geometrical Demonstration* 430a-434a 442a-446b / *Arithmetical Triangle* 451b 452a 458b-459b 464a-466a
34 NEWTON *Principles* 1a b
34 HUYGENS *Light* PREF 551b 552a
35 LOCKE *Human Understanding* BK II CH XVI SECT 4 166a b BK IV CH I SECT 9 308c 309b CH II SECT 9 10 311b c CH III SECT 29 322c CH VII SECT 11 340c 341a CH XII SECT 1-8 358c 360c passim SECT 14 15 362d 363b
35 BERKELEY *Human Knowledge* INTRO SECT 12 408a b SECT 15 16 409a d SECT 118 436b-c
35 HUME *Human Understanding* SECT VII DIV 48 470d 471c SECT X DIV 132 508d 509a
42 KANT *Pure Reason* 17d 18d 46a b 68a 69c 91c d 110a 110d 111a 211c 218d / *Practical Reason* 302d 303b 330d 331a / *Pref Metaphysical Elements of Ethics* 376c d
43 FEDERALIST NUMBER 3 103c
43 MILL *Utilitarianism* 445b c
45 LAVOISIER *Elements of Chemistry* PREF 2b
53 JAMES *Psychology* 869a 870a 874a 878a

3b The role of construction its bearing on proof mathematical existence and the scope of mathematical inquiry

7 PLATO *Meno* 180b 182 / *Republic* BK VI 387b-c
8 ARISTOTLE *Heavens* BK I CH 1 [279^{b}32 280 12] 371b c / *Metaphysics* BK IX CH 9 [1051 22 34] 577b c
11 EUCLID *Elements* BK I POSTULATES 1 3 2a PROP 1 2b 3a
23 HOBBES *Leviathan* PART IV 267a b
31 DESCARTES *Rules* XIV XVIII 28a 39d / *Geometry* BK II 304a 306a 316a b BK III 331b-332b
33 PASCAL *Vacuum* 373a b
34 NEWTON *Principles* 1a b
42 KANT *Pure Reason* 31b-d 68a 69c 86b c 91c d 94b 95a 211c 215a 217c d / *Science of Right* 399a b / *Judgement* 551a 553c
53 JAMES *Psychology* 673b

3c Analysis and synthesis function and variable

9 ARISTOTLE *Ethics* BK III CH 3 [1112^{b}20-24] 358d
11 ARCHIMEDES *Sphere and Cylinder* BK II PROP 1 434b 435b PROP 3-7 437a-443b / *Method* 569b 570a PROP 1 572b
11 APOLLONIUS *Conics* BK II PROP 44 47 710b-713a PROP 49-51 714b 726a BK III PROP 54 56 793b 798b
31 DESCARTES *Rules* IV 5c 7a VI 8a 10a XI 20d 23b 24a b XIII 25b 27d XIV 31a 33b XVI XXI 33d-40a c / *Objections and Replies* 128a d / *Geometry* 295a 353b esp BK I 296b-297b 298b 304a BK II 308a 314b
33 PASCAL *Geometrical Demonstration* 430a
34 NEWTON *Principles* BK I LEMMA 19 57b 58b / *Optics* BK III 543a b
35 LOCKE *Human Understanding* BK IV CH XII SECT 15 363a b CH XVII SECT 11 378b
45 LAVOISIER *Elements of Chemistry* PREF 1a 2b
45 FOURIER *Theory of Heat* 172a 173b 196a 251b

3d Symbols and formulae the attainment of generality

8 ARISTOTLE *Prior Analytics* BK I CH 41 [49^{b}32 37] 68c / *Posterior Analytics* BK I CH 10 [76^{b}39 77^{a}2] 105d
11 NICOMACHUS *Arithmetic* BK II 832a
23 HOBBES *Leviathan* PART I 56a
31 DESCARTES *Rules* XIV XXI 28a-40a c / *Discourse* PART II 46d 47b d / *Geometry* 295a 353b esp BK I 295a 298b BK II 314a b BK III 353a
35 LOCKE *Human Understanding* BK IV CH III SECT 19 318b 319a
35 BERKELEY *Human Knowledge* INTRO SECT 16 409b d SECT 121 122 436d-437c
42 KANT *Pure Reason* 68a 69c 211d 212a 212d 213a
45 FOURIER *Theory of Heat* 172b 173b 181a b 233b 240b

4 *Mathematical techniques*

4a The arithmetic and algebraic processes

8 ARISTOTLE *Topics* BK VIII CH 14 [163^{b}23 28] 222b
11 EUCLID *Elements* BK VII IX 127a 190b
11 ARCHIMEDES *Measurement of a Circle* PR P 3 448b-451b / *Conoids and Spheroids* LEMMA 455b-456a LEMMA TO PROP 2 456b-457b / *Spirals* PROP 10-11 488a-489b / *Sand Reckoner* 520a 526b
11 NICOMACHUS *Arithmetic* BK I 814b 821d
16 KEPLER *Epitome* BK V 990a b
23 HOBBES *Leviathan* PART I 56a 58a b
28 GALILEO *Two New Sciences* SECOND DAY 193b-c
31 DESCARTES *Rules* XVI 33d 35c XVIII 36b-39d / *Discourse* PART II 46d 47b-d / *Geometry* BK I 295a 296
33 PASCAL *Arithmetical Triangle* 447a-473b esp 451b-452a 458b-459b 464a-466a / *Correspondence with Fermat* 474a-487a passim
35 LOCKE *Human Understanding* BK IV CH XVII SECT 11 378b
35 BERKELEY *Human Knowledge* INTRO, SECT 19 410c SECT 121 122 436d-437c

42 KANT *Pur Reason* 17d 18d 68a-69c 212d 213a 217c d
53 JAMES *Ps hology* 874b 876b

4b The operations of geometry

7 PLATO *Meno* 180b-183c / *Republ c* BK VI 387b c
8 ARISTOTLE *Cat go ies* CH 7 [7^b29 33] 12c d
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34 NEWTON *Princip l* 1a b BK I LE MA 15-PRO 29 SCHOL 50a 75b esp LE MA 19 57b 58b
42 KANT *Judgement* 551a 552a
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4d The method of exhaustion the theory of l m ts and the calculus

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7 PLATO *Republ c* BK VII 391b 398c BK V II 403b d BK IX 424d 425b / *T ma u* 448b 450a 453b-454a / *Sta man* 585a b / *Phile bus* 633c d / *Laws* BK V 691d 692a 695c 697a BK VII 728b 730d
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9 ARISTOTLE *Ga t of An mal* CH 9 247a 248a / *Pol t cs* BK V CH 12 [1316 1 17] 518d 519a
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31 DESCARTES *R iles* IV 7a b XIV 31b d / *Discou se* PART I 43b c / *Objection and Re pl es* 169c 170a / *Geomet y* BK II 322b 331a
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28 GALILEO *T wo N w Scien es* FIRST DAY 131b 132a 133b FOURT I DAY 245b d 252a b
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II Wo ks by authors not repr s nted in this collection

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Chapter 53 MATTER

INTRODUCTION

AFTER we came out of the church says Boswell in his *Life of Johnson* we stood talking for some time together of Bishop Berkeley s ingenious sophistry to prove the non existence of matter and that every thing in the universe is merely ideal I observed that though we are satisfied his doctrine is not true it is impossible to refute it I shall never forget the alacrity with which Johnson answered striking *his foot* with mighty force against a large stone till he rebounded from it I refute it thus

But Berkeley s argument anticipated Dr Johnson s style of refutation I do not argue he says against the existence of any one thing that we can apprehend either by sense or reflexion That the things I see with my eyes and touch with my hands do exist really exist I make not the least question The only thing whose existence I deny is that which *philosophers* call Matter or corporeal substance And in doing this there is no damage done to the rest of mankind who I dare say will never miss it

The rest of mankind does need to be instructed however that when they use the word matter they speak of *nothing* They may from careless habit suppose they are referring to the most obvious something there is in the world—the solid massy concrete stuff of which tangible visible movable and moving things are made Of them Berkeley would ask how they know such stuff exists It is not itself perceptible

We perceive a variety of qualities—colors shapes temperatures textures sizes or extensions—but these Berkeley argues have their being *in being perceived* Even if certain of these sensible qualities sometimes called primary such as figure size or weight are supposed to belong to bodies when they are not actually being sensed they are not matter but only its properties Matter itself is not sensible Those who assert its existence postulate it as a substratum or support for the sensible qualities they perceive

The question therefore is whether such a substratum is a necessary or an unnecessary hypothesis Berkeley does not deny the existence of beings which cannot be directly sensed He affirms the existence of the human spirit or mind of minds other than his own and the spiritual being of God These must be inferred to exist in order to explain the phenomena of our sensible experience and the experience of our own activities in thinking imagining willing If in addition the existence of matter or a material substance were necessary to explain the phenomena Berkeley would not object to affirming its existence by inference even if it could in no way be directly perceived

His argument *therefore involves first* a denial of Locke s distinction between primary and secondary qualities Supposing it to be generally agreed that colors sounds odors have no actual existence except in the perceiving mind he denies that perceptible figure size or motion can exist otherwise It having been shown that none even of these can possibly exist otherwise than in a Spirit or Mind which perceives them it follows that we have no longer any reason to suppose the being of Matter

Matter is not needed as a substratum or support for the qualities we perceive This is the second main point in Berkeley s argument 'Though we give the materialists their external bodies they by their own confession are never the nearer knowing how our ideas are produced since they own themselves unable to comprehend in what manner body can act upon spirit or how it is *possible it should imprint any idea* in the mind Hence it is evident that the production of ideas or sensations in our minds can be no reason why we should suppose Matter or

corporeal substances since that I acknowledged to remain equally inexplicable with or without this supposition

Berkeley's arguments against matter which occupy the greater part of his *Principles of Human Knowledge* may not have the same force when they are applied against different theories of matter Berkeley seems to regard his attack on materialism as the refutation of an error at the root of skepticism atheism and irreligion He also thinks materialism creates difficulties for the sciences But are all affirmations of matter to be lumped together as materialism *in the same sense*? Are Aristotle Plotinus Descartes Spinoza and Locke materialists in the same sense as Lucretius Hobbes and perhaps Marx? Does it make no difference whether bodies are said to be the only real existences or whether in addition to bodies immaterial substances or spiritual beings are also said to exist?

Does it make no difference how matter is conceived—whether as a self subsistent substance in its own right capable of existing apart from any qualities except extension and motion which belong to its very essence or merely as one factor in the constitution of bodies the factor of potentiality which as will be presently explained has no existence apart from the forms which actualize it? Are skepticism atheism and irreligion to be associated with all affirmations of matter in view of the fact that theologians like Augustine and Aquinas seem to think that a sound view of matter supports the truths of religion against the errors of the materialists?

There seem to be in short three distinct positions to which Berkeley's blanket denial of matter stands opposed The diametrically opposite view seems to be the blanket denial of anything except bodies or of anything which cannot be reduced to a property or function of matter The atomism of Lucretius discussed in the chapter on Element may be taken as representative of this view though Engels would insist that materialism can be dialectical rather than atomistic or mechanical

Between the two extremes there appear to be two middle positions which are alike insofar as both affirm the immaterial as well as the material Although they are alike in asserting the existence of spiritual substances they may of course define the nature of these immaterial things differently and differently interpret their relation to the realm of matter But as theories of matter their principal difference consists in the way in which they conceive the being of bodies material substances or the bodily mode of substance

In the conceptions of Descartes and Locke for example it is matter which gives actuality to sensible bodies We have no other idea or notion of matter Locke writes but something wherein those many sensible qualities which affect our sense do subsist The entire substance of sensible bodies consists of matter *All their properties derive from the essence or* nature of matter But in the conceptions of Aristotle and Plotinus bodies would not exist at all if they were composed only of matter for matter is no more than a capacity for being not something which by itself actually is Sensible bodies derive their being and all their attributes from the forms which matter assumes when its potentialities are actualized Matter totally devoid of form is not the *nothing* Berkeley calls it but it is so near to nothing that Plotinus says it is more plausibly called a non being a bare aspiration towards substantial existence

These theories of matter or corporeal being seem to be as contrary to one another as together they are contrary to Berkeley's doctrine Yet each of the two middle positions leans toward one of the opposite extremes

The conception of matter seems to be very much the same in the complete materialism of Lucretius and Hobbes and in the view of Descartes Spinoza and Locke In the former only bodies exist In the latter bodies do not comprise the whole of existence but matter is the whole substance of bodies The separation of body and mind or matter and spirit into distinct substances or modes of substance leaves matter the same kind of stuff that it is in a world which admits of no other reality Atomism furthermore may be common to both theories at least to the extent that it is *held* that the complex bodies we perceive are composed of minute and insensible particles. Unlike Lucretius Locke may not insist upon the absolute indivisibility of the particles or upon the eternity of the uncreated atoms of matter

but he like Hobbes and Newton carries the division of the familiar bodies of sense expe rience down to parts which cannot be perceived and yet have in a way a more ultimate reality as units of matter than the complex bodies they constitute

Had we senses acute enough to discern the minute particles of bodies and the real con stitution on which their sensible qualities de- pend Locke writes I doubt not but that would produce quite different ideas in us and that which is now the yellow color of gold would then disappear and instead of it we should see an admirable texture of parts of a certain size and figure

At the other extreme Berkeley s complete denial of matter has less in common with the view of Aristotle Plotinus Augustine and Aqui nas than the theory of Descartes Spinoza and Locke has with the materialism of Lucretius and Hobbes They would appear to be close enough for one seems to hold that matter is almost non being and the other that matter is simply nothing at all But where Berkeley de nies any role to matter Aristotle and those who take his view affirm matter to be an indispen sable factor in the constitution of physical things They do not question the reality of bod ies or their existence apart from mind On both of these points they are as opposed to Berke- ley as they would be if they were complete materialists Nevertheless they lean toward Berkeley rather than toward the other extreme in one respect Where Berkeley denies the existence of matter they deny its substantiality Where Berkeley says matter has no being they say it has the lowest grade of being—on the very verge of not being!

IN SPITE OF ALL the differences noted the idea of matter has a certain constant meaning throughout the tradition of the great books

It is generally associated with the idea of quantity and especially the basic magnitudes such as time space and mass Sometimes it is said that the essence of matter itself is exten sion sometimes that bodies—not matter itself —have the property of trid mensionality But in either case that which *is* or *has* matter in it necessarily occupies space

The manner of that occupation is also gener ally agreed upon Two bodies or two distinct quantities of matter cannot occupy the same place at the same time A body may not be im penetrable in the sense of being indivisible but so long as it remains the whole that it is it offers resistance to other bodies tending to move into the place it occupies

There is another connection between matter and quantity To those who ask what makes two otherwise identical things two in number—or what is involved in the merely numerical dif ference of things alike in every other respect— the usual answer is in terms of matter Matter is traditionally spoken of as the principle of in dividuation Aquinas for example holds that angels unlike physical substances cannot differ from one another as do numerically distinct in dividuals Because they are immaterial they can differ only as do species or kinds Such things as agree in species he writes but differ in number agree in form but are distinguished materially If therefore the angels be not com posed of matter and form it follows that it is impossible for two angels to be of one species just as it would be impossible for there to be several whitenesses apart or several humanities since whitenesses are not several except in so far as they are in several substances

The way in which matter is related to in dividual differences can be exemplified in works of art Two coins stamped out of the same kind of matter by the impression of the same die may differ in no other discernible respect than that they are *two* of the same kind Their *twoness* seems to be somehow related to the fact that each consists of a distinct quantity of mat ter But it may be asked how two units of mat ter have the distinction of being two while they differ in no other respect One answer to this difficult question is that their distinction con sists in their occupying different places In the Platonic theory of the origin of many particu lars all participating in the same form diversity of place seems to play the role which matter plays for Aristotle and Aquinas

Plato s doctrine of the receptacle which is discussed in the chapter on FORM is sometimes interpreted by conceiving the receptacle as space and sometimes by conceiving it as mat ter The receptacle it is said in the *Timaeus* is that which while receiving all things never

departs at all from her own nature and never in any way or at any time assumes a form like that of any of the things which enter into her This according to Plotinus means that its one form is an invincible formlessness

But Plotinus who combines Plato s doctrine of the receptacle and the forms with Aristotle s theory of potentiality and actuality holds that it is matter not space which is the receptacle and nurse of all generation He says that recipient and nurse is a better description of matter than the term mother for that term is used by those who think of a mother as matter to the offspring as a container only giving nothing to them In his own view matter is more than space or mere receptivity He is willing to admit the parallel with motherhood only to the extent that matter is sterile not female to full effect female in receptivity only not in pregnancy

TRADITIONALLY *the distinction between universal and particular is understood as a distinction between the intelligible and the sensible* This indicates another traditional meaning of matter or the material The realm of sensible things is the realm of bodies But the atoms which are the elementary bodies are also usually called insensible particles of matter This however can be interpreted to mean not that a definite material mass or bulk is in itself absolutely *intangible* or *imponderable* but that because of the limitation in our senses it is imperceptible to us On this interpretation it would then seem possible to say that *all* bodily existence is sensible existence

But if we ask about the sensibility of matter itself rather than of bodies large or small questions arise which are more difficult to solve On one theory of matter matter devoid of form is as insensible as it is unintelligible yet forms which are not material that is not in matter are also insensible but not unintelligible On the contrary they are regarded as more perfectly intelligible than embodied forms How then does matter which is itself insensible cause the forms which it assumes to become sensible when they are materialized?

The theory of matter which does not regard it as a co-principle with form seems to be confronted with a different problem of sensibility It is supposed that some of the qualities which we sense in bodies are actually in them whether we sense them or not—such properties as size figure weight motion Other sensible qualities such as colors odors temperatures or sounds are supposed to be effects produced by the motions of material particles acting on the sensitive apparatus of animals This distinction between what Locke calls primary and secondary qualities —found also in Lucretius and Descartes—is more fully considered in the chapters on QUALITY and SENSE but here it calls attention to the problem of how matter devoid of certain sensible qualities causes these qualities to arise

For Lucretius the peculiar difficulty of the problem seems to lie in the fact that the sensitive animal is itself nothing but a material system All its powers and acts are conceived as functions of matter in motion How then does moving matter within the organism generate certain qualities which do not belong to moving *matter outside the organism? For Locke the* problem raises a difficulty of still another sort Secondary qualities such as colors sounds odors exist only as sensations in the mind In corporeal substances or bodies such qualities he writes are nothing but the powers those substances have to produce several ideas in us by our senses which ideas are not in the things themselves otherwise than as anything is in its cause Though they result from the impact of moving particles on the bodily sense organs they do not belong to the world of matter at all, but to the realm of spirit How then do the motion of matter cause effects which exist only in the immaterial domain of mind?

These questions indicate some of the problems of matter as an object condition or cause *of knowledge They also show how the nature* of the problem varies with different conceptions of matter both in itself and in its relation to mind There are still other problems which confront those theories of mind which separate reason or intellect from the sensitive faculty

In such theories the consideration of matter s relation to mind goes beyond the question of the origin of sensations It takes sensations and images as somehow the functions of living matter—the acts of the various sense-organs and the brain But sensations and images because they are acts of corporeal organs have the

same limitation which belongs to everything material As matter is said to cause the individ uality or numerical diversity of bodies so is it said to make sensations and images particular intentions of the mind —that is capable of representing only particular objects not gener al kinds or classes Hence such theories face the problem of the relation of sensations and images to the universal intentions of the mind its general concepts or abstract ideas

ONE MORE TRADITIONAL meaning of matter re mains to be mentioned The sciences of physics or mechanics are concerned with change or mo tion They are not concerned with mutability in general but with the kind of mutability that is manifested by material things Material things are never conceived as unmovable or un changeable

The question whether matter itself is immu table has different meanings for different theories of matter On the theory (discussed in the chapter on CHANGE) that matter and form are together principles of change in changing sub-stances it is neither matter nor form but the substance composite of matter and form which changes Those who think that the motions of the physical world are without beginning and end attribute a similar eternity to matter and conceive it as imperishable The theologians who think that God can annihilate whatever He creates do not hold that matter is indestruct ible but they nevertheless attribute everlast ing endurance to matter in God s plan Aquinas for example in his treatise on the end of the world describes the final conflagration which will purge the material universe but leave its matter in existence under the forms of the ele-ments and the heavenly bodies The world will be renewed he writes in such a way as to throw off all corruption and remain forever at rest Hence nothing can be the subject of that renewal unless it be a subject of incorrup tion such as the heavenly bodies the ele-ments and man

On other theories of matter the fact that mo-tion is regarded as an intrinsic property of bod ies seems to be similarly consistent with the notion that matter itself is immutable or inde-structible This indestructibility may be con ceived in terms of the absolute indivisibil ty of the atoms as in Lucretius and Newton or as in Spinoza it may be established by the uncreated and eternal nature of God By body Spinoza writes I understand a mode which expresses in a certain and determinate manner the essence of God in so far as He is considered as the thing extended

In the modern development of the science of mechanics the law of the conservation of mat ter seems to be another expression of the same insight We may lay it down as an incontest able axiom Lavoisier writes that in all the operations of art and nature nothing is created an equal quantity of matter exists both before and after the experiment What appears to be the destruction of a body is merely the trans formation of its matter into another physical condition without loss of mass unles there is an equivalent gain in energy The total quantity of matter and energy remains constant through out all physical changes

But though change or motion seems to be in herent in the material world the mutability of bodies as well as the immutability of matter seems to be differently conceived according to different conceptions of matter The difference between the physics of Aristotle and the phys ics of Descartes can be expressed in terms of contrary definitions of motion or divergent notions of causality but neither of these differ ences is fully intelligible apart from the vari ance of these theories from one another on the nature of matter

When matter is an actual substance whose es sence is extension and whose chief property is local motion the principles of physics are me chanical The laws of mechanics with time space and mass as their fundamental variables seem to have a universality adequate for de-scribing all natural phenomena All changes in material things are either the local motions of bodies or the result of the local motions of their parts Motions are determined in their magni tude and direction by the impressed force which one body exerts upon another and the resistance of that other Mot on is itself completely ac tual as matter is and the only type of cause to which physics need appeal is the efficient cause that is the pu h or pull of one body upon another

Physicists who share this conception of mat

ter may not agree as Descartes and Newton do not in their mechanical formulations They may or may not be atomists They may like Lucretius think that local motion is an absolutely intrinsic property of the eternal particles or like Descartes and Newton they may think that God first imparted motion to matter at the world s creation They may hold that all subsequent motions issue therefrom in a continuous chain of cause and effect But when matter is the only factor in the constitution of bodies and one body differs from another only in its quantitative determinations the consequence for physical theory seems to be one or another sort of mechanical formulation

When matter is nothing more than a body s potentiality for change and when neither what the body is nor how it changes can be explained by reference to its matter alone physical theory seems to be constructed in other than mechanical terms Its concepts and principles resemble those of biology It finds natural tendencies or desires and ends or final causes in the motion of inert as well as animate bodies

Central to Aristotle s physics are his theory of the four causes discussed in the chapter on CAUSE and his theory of the four types of change discussed in the chapter on CHANGE But even more fundamental is his definition of motion as the actualization of that which is potential in a respect in which it is potential With motion so defined the principles of physics must include the correlative factors of potentiality and actuality which Aristotle conceives in terms of matter and form

REMOVE MATTER entirely from a thing and according to Aristotle you remove its capacity for physical change Remove form and you remove its existence for nothing can exist without being actual or determinate in certain respects *When a thing changes physically it* loses certain determinate characteristics and acquires others The determinations it acquires it had previously lacked yet all the while it must have had a capacity for acquiring them The thing is capable both of being and of not being Aristotle says and this capacity he goes on to say is the matter in each The matter of an existing substance is thus conceived as that which has certain forms (the respects in which the substance is actually determinate) and lacks certain forms which it can assume (the respects in which the substance is both indeterminate and potential)

As the chapter on ART indicates Aristotle frequently uses artistic production to afford a simple illustration of his theory of matter and form as principles of change When a man sets out to make a bed he chooses material such as wood which can be shaped in a certain way The same wood could have been made into a chair or a table With respect to these various possible determinations in structure the wood is itself indeterminate and determinable

Before the artist has worked on it productively the wood is in a state of both privation and potentiality with regard to the form of a bed a chair or a table The transformation which the artist effects consists in his actualizing certain potentialities in the material for forms or determinations which the material at the moment lacks When the bed is made the wood or matter which is now actually in the form of a bed may still have the potentiality for being *remade* into a chair or table

The wood of course remains actually wood throughout these artificial changes as it does not when it suffers the natural change of combustion This indicates that though the wood may be called matter or material by the artist it is not matter but a substance a thin composite of matter and form for when the wood is reduced to ashes by fire the matter which had the form of wood assumes another form

In the analysis of accidental change which artistic production illustrates it suffices to treat a composite substance like wood or iron or bronze as the material principle But in the analysis of substantial change when matter itself changes from being one kind of matter to being another in the coming to be or perishing *of composite substances the material principle* must be pure matter—matter totally devoid of form Where a whole substance can be regarded as the matter or substratum of accidental change (in quality quantity or place) the substratum of substantial change which Aristotle calls generation and corruption must be matter in a condition of absolute indeterminacy and pure potentiality

Referring to this ultimate substratum as the

underlying nature Aristotle says that it is an object of scientific knowledge by analogy For as the bronze is to the statue the wood to the bed so is the matter and the formless before receiving form to anything which has form and so also is the underlying nature to substance *i e* the actually existing

ARISTOTLE S DEFINITION of matter as the primary substratum of each thing from which it comes to be without qualification and which persists in the result not only signifies an object which the physicist must apprehend analogically (*i e* by comparison with substantially formed matter like wood and bronze) but also indicates that matter by definition must be in itself both unintelligible and non existent What Aristotle calls the primary substratum is later called by Plotinus primal matter by Augustine formless matter and by Aquinas prime matter Since they all agree that that which is without form lacks all determination and actuality they deny that it can have existence by itself or be an object of knowledge either by sense or reason.

Augustine and Aquinas go further They deny even to God s omnipotence the power of creating matter without form They speak of matter not as created but as *concreated* that is united at the very instant of its creation with the forms it must assume in order to exist God made formless matter of absolutely nothing and the form of the world from this formless matter Augustine writes Yet He created both simultaneously so that form came upon matter with no space of time intervening

IN THE TRADITION of Aristotle s physics and metaphysics especially as developed by Aquinas matter and form become basic analytic terms often having a significance remote from their original meaning in the analysis of change The conception of prime (or formless) matter as the substratum of substantial change leads to the designat on of the formed matter underlying accidental change as second matter This in turn is called signate matter when considered as the matter of an ind vidual substance it is viewed as having the limiting determinations of indiv duality

Matter is twofold Aquinas writes common and signate or individual common such as flesh and bones and individual as this flesh and these bones When the intellect forms concepts of different kinds of physical substances, it abstracts from the individual sensible matter but not from the common sensible matter In defining the nature of man for example we abstract Aquinas says from this flesh and these bones which do not belong to the species as such but to the individual but we do not abstract from the fact that man consisting of body and soul is a thing of flesh and bones

To say that man consists of body and soul is to indicate that common matter enters into the definition of man as a physical substance But in distinction from definitions of this type which are proper to physics mathematical and metaphysical definitions carry the abstraction from matter still further In mathematics Aquinas declares the intellect abstracts not only from individual sensible matter but also from common sensible matter In conceiving numbers and figures the intellect does not however abstract from matter entirely but only from individual intellig ble matter The common intelligible matter which is represented by substance as subject to quantity underlies all mathematical notions But some things Aquinas maintains can be abstracted even from common intelligible matter such as *being unity potency act* and the like all of which can exist without matter Such abstraction characterizes the concepts of metaphysics Aquinas thus differentiates the three speculative sciences of physics mathematics and metaphysics in terms of three grades of abstraction each distinguished by the type of matter from which the concepts of the science are abstracted

With one exception physical matter is not said to be of d fferent kinds when it exists under different forms The one exception for both Aristotle and Aquinas is the matter of terrestrial and celestial bod es

Basing his inference on the observations available to him Aristotle holds that the heavenly bodies are eternal— not subject to increase or diminution but unaging and unalterable and unmodified Immutable in every other way they a e however subject to local motion Since they are eternal both their matter and

their motion must be different from that of perishable terrestrial bodies All things that change have matter Aristotle writes but matter of different sorts of eternal things those which are not generable but are movable in space have matter—not matter for generation however but for motion from one place to another That motion from place to place is unlike terrestrial motion circular it has the appropriate characteristic of endl ssness

Kepler challenges this theory of a radical difference between celestial and terrestrial matter or motion and as the chapter on ASTRONOMY shows by so doing he not only gives impetus to the Copernican system but also paves the way for Newton to frame laws of motion applicable to matter everywhere in the universe Because their matter is the same it is possible Kepler insists to explain the motion of the heavenly bodies by the same principles which account for the motion of bodies on earth

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example n 4 HOMER *Iliad* BK II [265 283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the passage is in section d of page 12

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lower halves of the page For example in 53 JAMES *Psychology* 116a 119b the passage begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the page For example in 7 PLATO *Symposium* 163b 164c the passage begins in the lower half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One or more of the main divisions of a work (such as PART BK CH SECT) are sometimes included in the reference line numbers in brackets are given in certain cases e g *Iliad* BK II [265 283] 12d

BIBLE REFERENCES The references are to book chapter and verse When the King James and Douay versions differ in title of books or in the numbering of chapters or verses the King James version is cited first and the Douay indicated by a (D) follows e g OLD TESTAMENT *Nehemiah* 7 45—(D) *II Esdras* 7 46

SYMBOLS The abbreviation esp calls the reader s attention to one or more especially relevant parts of a whole reference passim signifies that the topic is discussed intermittently rather than continuously in the work or passage cited

For additional information concerning the style of the references see the Explanation of Reference Style for general guidance in the use of *The Great Ideas* consult the Preface

1 The conception of matter as a principle of change and as one constituent of the being of changing things the receptacle or substratum

7 PLATO *Timaeus* 455c-458b

8 ARISTOTLE *Physics* BK I CH 4-9 262a 268d BK III CH 7 [207b35 208a4] 286c / *Metaphysics* BK I CH 6 [987b19]-CH 7 [988b5] 505d 506c CH 8 [988b22-989b24] 506d 508a BK I CH 3 [995 15 17] 513d BK V CH 2 [1 13 24 27] 533b CH 4 534d 535c BK VII CH 3 551b 552a CH 7 17 555a 566a c esp CH 7-9 555a 558a CH 17 565a 566a c BK VI 566a 570d BK XII C 10 [1075 25 33] 606a / *Soul* BK III CH 5 [430 1 14] 662c

12 AURELIUS *Meditations* BK VII SECT 23 281b BK XII SECT 30 310a b

16 PTOLEMY *Almagest* BK I 5b

17 PLOTINUS *First Ennead* TR VIII CH 1 32a b / *Second Ennead* TR IV V 50a 60c TR V I CH 3 64b-c / *Third Ennead* TR VI CH 7 19 110d 119a / *Sixth Ennead* TR III CH 2-8 281 285d

18 AUGUSTINE *Confessions* BK X par 6 100b-c par 14 102b

19 AQUINAS *Summa Theologica* PART I Q 3 A 2 ANS and REP 3 15c 16 Q 4 A 1 ANS and REP 2 20d 21b Q 7 A 1 ANS 31a d A 2 ANS and REP 3 31d 32c Q 14 A 2 REP 3 76d 77d Q 15 3 REP 3 93b 94a Q 18 A 4 REP 2 3 107d 108 Q 47 A 1 ANS 256a 257b Q 86 A 3 463b d PART I II Q A 1 REP 2 662d 663d

20 AQUINAS *Summa Theologica* PART I II Q 5 A 1 ANS 15d 18a PART III Q 2 A 1 ANS and REP 2 710a 711c

28 GILBERT *Loadstone* BK I 25b

35 LOCKE *Human Understanding* BK II CH X SECT 5 295a-c

35 BERKELEY *Human Knowledge* SECT 11 415a b

42 KANT *Pure Reason* 72c 76c esp 74b 76c 185b d / *Judgement* 565b d 566d 567a

1*a* Matter and the analysis of change prime and secondary matter privation and form participation and the receptacle

7 PLATO *Timaeus* 455c-458b

8 ARISTOTLE *Physics* BK I CH 4-9 262a 268d BK II CH 1 [193 9-b21] 269b 270a CH 3 [194b16-195a21] 271a d BK I CH 7 BK III CH 3 275b 280 BK IV CH 2 [209b1 2 13] 288b-289a CH 4 [21 b5 212] 290c 291a CH 9 [217a20-b26] 297a-c BK VI CH 10 [24 b8-241a26] 324c 325b / *Heavens* BK I CH 3 360d 362a BK III CH 2 [3 1b33-302 9] 393b K

(1 *The conception of matter as a principle of change and as one constituent of the being of changing things the receptacle or substratum 1a Matter and the analysis of change prime and secondary matter privation and form participation and the receptacle*)

IV CH 5 403d 404d / *Generation and Corruption* 409a 441a c esp BK I CH 3 413c 416c / *Meteorology* BK IV CH 12 [389^{b}22 390^{a}7] 493d 494a / *Metaphysics* BK I CH 6 [987^{b}30–988 8] 506a BK II C 1 2 [994 1-6] 512b [994 19–^{b}8] 512c d BK III CH 4 [999^{a}24 ^{b}24] 518a-c BK V CH 4 [1014^{b}27 1015 10] 535a b CH 6 [1016 17–24] 536c d BK VI CH 2 [1026^b 7 1027 15] 549a b CH 3 [1027^{b}15 17] 549d BK VII CH 7–9 555a 558a BK VIII CH 1 [1042 24 ^{b}7] 566b d CH 4–6 568d 570d BK IX CH 7 574c 575a BK XI CH 9 [1065^{b}20 35] 594a b BK XII CH 2–5 598c 601a CH 10 [1075^{a}25 ^{b}24] 606a c

9 ARISTOTLE *Generation of Animals* BK I CH 20 [729^{a}10]–CH 22 [730^{b}33] 269b 271a

12 AURELIUS *Meditations* BK VII SECT 23 281b

16 KEPLER *Harmonies of the World* 1078a b

17 PLOTINUS *Second Ennead* TR III CH 18 TR V CH 5 49c 60c / *Third Ennead* TR VI CH 7 19 110d 119a / *Sixth Ennead* TR III CH -8 281c 285d TR V CH 8 307d 308c

18 AUGUSTINE *Confessions* BK XII par 3–6 99d 100c par 8 101a b par 14 16 102b 103 par 24 26 104c 105b par 28 31 105 107a par 38 40 108d 110 BK XI I par 48 124a

19 AQUINAS *Summa Theologica* PART I Q 3 A 2 ANS 15c 16a A 8 ANS 19d 20c Q 4 A 1 ANS and REP 2 20d 21b Q 5 A 3 REP 3 25a d Q 7 A 2 REP 3 31d 32c Q 9 A 1 ANS 38c 39c Q 29 A 2 REP 3–5 163b 164b Q 45 A 2 REP 2 242d 244a A 8 249b 250a Q 46 A 1 REP 6 250a 252d Q 47 A 1 ANS 256a 257b Q 48 A 3 ANS 261b-262a Q 66 A 1 343d 345c Q 77 A 1 REP 2 399c 401b Q 84 A 3 REP 2 443d-444d Q 86 A 3 463b d Q 92 A 2 REP 2 489d-490c A 3 REP 1 490c 491b A 4 ANS and REP 1 491b d Q 103 A 1 REP 2 528b 529a Q 104 A 1 ANS and REP 2 534c 536c Q 110 564c 568b Q 117 A 3 598c 599b PART I II Q 22 A 1 REP 1 720d 721c

20 AQUINAS *Summa Theologica* PART I II Q 60 A 1 49d 50c Q 85 A 6 182d 184a PART II II Q 24 A 11 ANS 498b 499c PART III SUPPL, Q 92 A 1 REP 12 1025c 1032b

21 DANTE *Divine Comedy* PARADISE VII [121–148] 116b c XIII [52–87] 126a b

28 GILBERT *Loadstone* BK I 25b

28 HARVEY *On Animal Generation* 407c-409b 412a-415b 494a-496d esp 494b 495c-496a

35 LOCKE *Human Understanding* BK III CH X SECT 15 295a-c

35 BERKELEY *Human Knowledge* SECT 11 415a b

42 KANT *Pure Reason* 74b 76c 100d 101b

1*b* Matter in relation to the kinds of change substantial and accidental change terrestrial and celestial motion

8 ARISTOTLE *Physics* BK II CH 1 [200^{b}26–201 14] 278b-c CH 3 [202^{b}22 29] 280c BK IV CH 9 296b 297c esp [217^{a}20–^{b}26] 297a-c BK V CH 1 2 304a 307b / *Heavens* BK I CH 2-5 359d 364a CH 9 12 369a 375d BK II CH 4 [287^{b}15 1] 379b BK IV CH 3 [310^{b}22 311 12] 402b c CH 4 [312 3 22] 403c d / *Generation and Corruption* 409a 441a c esp BK I CH 4 [320^{a}2 6] 417a / *Metaphysics* BK VII CH 7-9 555a 558a esp CH 7 [1032 15 22] 555a b BK VIII CH 1 [1042 24 ^{b}7] 566b d CH 4 [1044^{b}2]–CH 5 [1044^{b}29] 569a-c BK IX CH 7 [1049 19–^{b}1] 574d 575a CH 8 [1050^{b}20 28] 576c d BK XI CH 11 [1067^{b}1] CH 12 [1068^{b}25] 596a 597d BK XII CH 2 5 598 601a esp CH 2 [1069^b 24 27] 599a / *Soul* BK I CH 3 [406^{b}26–407^b 13] 636b 63 b

16 PTOLEMY *Almagest* BK I 5a 6a 8b 10b 11b BK XIII 429a b

16 COPERNICUS *Revolutions of the Heavenly Spheres* BK I 517b 518a 519b 520a

16 KEPLER *Epitome* BK IV 888b 890b 894a 929b 930b

17 PLOTINUS *Second Ennead* TR I CH 1 4 35a 37b TR IV CH 6 51d 52a TR V CH 6 103b-104a / *Third Ennead* TR VI CH 8 19 111c 119a

19 AQUINAS *Summa Theologica* PART I Q 7 A 2 ANS and REP 3 31d 32c Q 45 A 2 REP 2 242d 244a Q 46 A 1 REP 1 3 5–6 250a 252d Q 48 A 3 ANS 261b 262a Q 55 A 2 ANS 289d 290d Q 66 A 1 ANS 343d 345c A 2 345d 347b Q 84 A 3 REP 1 443d-444d

20 AQUINAS *Summa Theologica* PART I–II Q 49 A 4 ANS 5a 6a

28 GILBERT *Loadstone* BK VI 110b-c

1*c* Matter and the distinction between individual and universal signate and common matter sensible and intelligible matter

8 ARISTOTLE *Metaphysics* BK I CH 6 [987^{b}19–988 6] 505d 506b BK III CH 3 [998^{a}20–^{b}13] 517a b CH 4 [999^{a}24 10 0 4] 518a d CH 6 [1003 5 16] 521d 522a c BK VII CH 10-11 558a 561a CH 15 [1039^{b}27 31] 563d BK VII C 1 6 [1045 33 36] 570a b BK X CH 1 [1052 28 37] 578d BK XII CH 4–5 599d 601a BK XIII CH 10 618c 619a c / *Soul* BK II CH 1 [412 6–8] 642a

12 AURELIUS *Meditations* BK XII SECT 30 310a b

17 PLOTINUS *Second Ennead* TR IV CH 2-5 50b 51d / *Sixth Ennead* TR III CH 3 282a-c

19 AQUINAS *Summa Theologica* PART I Q 3 A 2 REP 3 15c 16a A 3 ANS 16a d Q 4 A 1 REP 3 20d 21b Q 7 A 1 ANS 31a d Q 14 A 11 ANS 84c 85c Q 15 A 3 REP 4 93b 94a Q 29 A 1 162a 163b A 2 REP 3 163b 164b A 3 REP 4 164c 165c Q 47 A 2 ANS 257b-

258c Q 50 A 4 ANS 273b 274b Q 56 A 1 RE 2 292a d Q 65 A 3 ANS 341c 342b Q 75 A 4 ANS 381b 382a A 5 ANS 382a 383b A 7 ANS 384d 385c Q 76 A 2 388c 391a Q 85 A 1 REP 2 451c-453c Q 115 A 1 ANS and REP 1 3 585d 587c Q 119 A 1 ANS 604c 607b

20 AQUIN S *Summa Theologica* PART III Q 2 A 2 ANS 711d 712d A 3 REP 3 713a 714c

2 The conception of matter as extension as a bodily substance or as a mode of sub stance atoms and compound bod es

10 GALEN *Natural Faculties* BK I CH 12 172d 173c

12 LUCRETIUS *Nature of Things* BK I [146 448] 2d 6c [483-634] 7a 8d

17 PLOTINUS *Second Ennead* TR IV CH 7 52c CH 12 54c 55b TR VII CH 3 64b-c / *Third Ennead* TR I CH 2 78d TR VI CH 7 111a CH 12 114b-c CH 16-19 116c 119a

23 HOBBES *Leviathan* PART IV 271d 272a

28 GALILEO *Two New Sciences* FIRST DAY 131d 132a

31 DESCARTES *Rules* XIV 28a 33b / *Medita tions* I 77d 81d esp 78c d, 80b d / *Obj t ons a d Repl s* 114d 115a c DEF VII 130c d 153c 154b 231a 232a

31 SPINOZA *Ethics* PART I PROP 14 COROL 2 PROP 15 360 361d PART II DEF I 373a PROP 2 374a

34 NEWTON *Optics* BK III 537a b 541b

35 LOCK *Huma U derstand ng* BK II CH XIII SECT I 27 150d 154d passim CH XXIII 204 214b passim BK III CH X SECT 15 295 c BK IV CH X SECT 9-19 351b 354c pass m

35 BERK LEY *Human Knowledge* SECT 9-17 414d-416b passim SE T 37 419d ECT 50 422c ECT 91-96 430d-431d

35 HU *Human Underst d ng* SECT XII DIV 123 506a

42 KANT *Pur Reason* 15b c 99a 100d esp 100c d / *Judgement* 580c d

45 LA O S ER *Element of Chem stry* PREF 3b-4a

45 FARADAY *Res ch s in Electricity* 850b d 855a c

53 JAMES *Psychology* 876a b 882a 884b

2a The p ope ties of matter hypothe es con cerning its con t t on

8 A ISTOTLE *H ens* BK III CH 4 [303 3 b8] 394b d / *Generation nd Corrupt on* BK I CH 2 410d-413c CH 8 423b 425d / *Metaphys cs* K I H 4 [985b3 19] 503c d

10 G N *Natur l F cult es* K I CH 12 172d 173c

12 LUCRETIU *Natu f Things* BK I [146-920] 2d 12b K II [333-99] 19b 27

16 KE LER *Epitome* BK V 936a 937a

23 HOBBES *Lev th n* PART IV 271d 272a

28 GILBE T *Lo d t n* BK II 29c 30a

28 G LILEO *Two New Sciences* SECOND DAY 178a 196d passim

30 BACON *Novum Organum* BK II APH 8 140b APH 25 155a d APH 40 170c 173d APH 48 179d 188b

31 DESCARTES *Meditations* II 78c d 80b d / *Objections and Replies* DEF VII 130c d 154a 231a 232a

31 S INOZA *Ethics* PART I PROP 14 COROL 2-PROP 15 360a 361d PROP 25 COROL 365b PART II DEF I 373a PROP 2 374a

34 NEWTON *Pri ciples* DEF I 5a DEF III 5b BK II PROP 40 SCHOL, 246a b BK III RULE III 270b-271a PROP 6 COROL III IV 281b PROP 7 281b 282b GENERAL SCHOL, 371b / *Opti s* BK II 479b-485b BK III 531a 543b esp 541b 543a

34 HUYC ENS *Light* CH III 566b 569b CH V 601b 603b

35 LOCKE *Human Understand ng* BK II CH IV 129b 131a CH VIII SECT 7 26 134b 138b pass m CH XIII SECT 27 152d 154d CH XXI SECT 2 4 178 179c SECT 75 200b d CH XXIII SECT I 32 204a 212d passim CH XXVI S CT 2 239b d esp 239d BK III CH VI SECT 5 269b c SECT 21 273c d CH X S CT 15 295a c BK IV CH III SECT 6 313c 315b

35 BERKELEY *Human Knowledge* SECT 9-18 414d 416c pass m S CT 37 419d SECT 47 421c 422a SECT 85 429 SECT 91 430d 431a

42 KANT *Pur Reason* 99a 100d esp 100 d 137a 140c 152a-d

45 LAVO SIER *Elements f Chem istry* PART I 9a 10c 12d 13d 16b-c

45 FOURI R *Theory of He t* 169b 170a

45 FAR DAY *Re ear h in El ctr city* 273 276a 386 390d 604 632d esp 604 607a c 626c 632d 819a 850b d 855a c

46 HEGEL *Ph losophy f H sto y* INTRO 160c d

51 TOLSTOY *Wa and Peace* EPILOGUE II 695c

53 JAMES *Psycholog* 68a b

2b The motions of matt or bodies

8 ARISTOTLE *Physics* BK I CH 6-9 292c 297 / *Gener tion and Corruption* BK I CH 8 423b-425d

10 G L N *Natural Faculties* K I C I 12 172d 173c

12 LUCRETIUS *N ture f Th gs* BK I [329-397] 5b 6 [951 1113] 12d 14d BK II [6 -332] 15d 19b K I I [177 2 5] 32b-c

19 AQUINA *Summa Th l gi a* PART I Q 47 A ANS 256a 257b Q 115 A I AN and REP 3 5 585d 587c

23 HO ES *Le i th* PART I 50a b PART IV 268d 271d 272a

28 G IL O *Tu New Sc en s* IRST DAY 157b 171b THIRD DAY FOURTH DAY 197a 260 c

(2 *The conception of matter as extension as a bodily substance or as a mode of substance atoms and compound bodies 2b The motions of matter or bodies*)

30 BACON *Novum Organum* BK I APH 66 114d 115c BK II APH 35 36 162a 168d APH 40 170c 173d APH 48 179d 188b
31 DESCARTES *Discourse* PART V 54b 60c / *Objections and Replies* 114d 115a DEF VII 130c d 231a b
31 SPINOZA *Ethics* PART II LEMMA I 7 378c 380b
34 NEWTON *Principles* 1a 372a / *Optics* BK III 541b
35 LOCKE *Human Understanding* BK II CH XXI SECT 2 4 178c 179c CH XXIII SECT 17 209a SECT 22 209d SECT 28 29 211b 212a
38 MONTESQUIEU *Spirit of Laws* BK I 1b
45 LAVOISIER *Elements of Chemistry* PART I 41b c
45 FOURIER *Theory of Heat* 169a b
51 TOLSTOY *War and Peace* EPILOGUE II 694d 695c
53 JAMES *Psychology* 882a 883a 884b passim

2c Matter as the support of sensible qualities

8 ARISTOTLE *Sense and the Sensible* CH 4 [442 30 ^{b}24] 680a c CH 6 [445^{b}4 446^{a}20] 683b 684c
12 LUCRETIUS *Nature of Things* BK II [398–477] 20a 21a [730–885] 24b 26b BK IV [522–721] 51a 53d
17 PLOTINUS *Second Ennead* TR IV CH 8 13 52c 53d / *Third Ennead* TR VI CH 6–19 109d 119a / *Fourth Ennead* TR VII CH 8 196 b / *Sixth Ennead* TR I CH 29 267c 268b
23 HOBBES *Leviathan* PART I 49b d 57a b PART III 172b
30 BACON *Novum Organum* BK II APH 40 170c 173d
31 DESCARTES *Meditations* II 78c d 80b d / *Objections and Replies* DEF VII 130c d 228c 229b 229d 230c 231a b
35 LOCKE *Human Understanding* BK I CH VIII SECT 7 26 134b 138b passim CH XXIII 204a 214b passim esp SECT 1–6 204a 205c SECT 15 208c d
35 BERKELEY *Human Knowledge* SECT 7 21 414b-417a SECT 37 419d SECT 49 422b SECT 73 427b c SECT 76–78 427d 428b SECT 91 430d-431a
35 HUME *Human Understanding* SECT XII DIV 122 123 505c 506a esp DIV 123 506a
42 KANT *Pure Reason* 15b c 100c d
53 JAMES *Psychology* 185a 331a 503a

2d The redemption of body and mind or matter and spirit

17 PLOTINUS *First Ennead* TR I 1a 6b esp CH 3 7 1d-4a / *Sixth Ennead* TR IV CH I 297b-d CH 4–6 299a 300b
19 AQUINAS *Summa Theologica* PART I Q 76 A 4 393a 394c
30 BACON *Advancement of Learning* 48d 50b
31 DESCARTES *Discourse* PART IV 51d 52a / *Meditations* II 77d 81d passim VI 96b 103d passim / *Objections and Replies* DEF VI VII 130c DEF X 130d PROP IV 133c 153c 155c 224d 225d 231a 232d 248b
31 SPINOZA *Ethics* PART I PROP 14 COROL 2 360a PROP 15 SCHOL 360b 361d PART II PROP 1 7 373d 375c PROP 10–13 376c 378c PART III PROP 2 396c 398b PART V PREF 451a 452c
35 LOCKE *Human Understanding* BK II CH XIII SECT 16 151d 152a CH XXIII SECT 5 205a b SECT 15 32 208c 212d passim CH XXVII SECT 27 227d 228a BK IV CH III SECT 28 322a-c CH X SECT 9–19 351b 354c passim
35 BERKELEY *Human Knowledge* SECT 18 20 416b 417a
53 JAMES *Psychology* 84a 93b esp 88a 90a 95b 98a 115a 119b esp 118b 119b 139a 140a 221a 226a esp 221a 222b 225b 226a

3 The existence of matter

3a Matter as the sole existent materialism atomism

7 PLATO *Sophist* 567a 568a
8 ARISTOTLE *Physics* BK II CH I [193 9–28] 269b-c / *Heavens* BK III CH 4 [303 3 ^{b}8] 394b d / *Generation and Corruption* BK I CH 2 410d-413c CH 8 423b-425d / *Metaphysics* BK I CH 3 [983^{b}7] CH 4 [985^{b}21] 501d 503d CH 8 [988^{b}23–989^{b}20] 506d 507d BK VII CH 13 [1039^{a}2 11] 562d BK XII CH 10 [1075 25 1076 5] 606a d
10 GALEN *Natural Faculties* BK I CH 12 172d 173c
12 LUCRETIUS *Nature of Things* BK I [146–634] 2d 8d
12 AURELIUS *Meditations* BK IX SECT 39 295a BK X SECT 6 297a b
17 PLOTINUS *Second Ennead* TR IV CH I 50a b CH 7 52c / *Third Ennead* TR I CH I 3 79b-c / *Fourth Ennead* TR VII CH 2 4 192a 193c / *Sixth Ennead* TR I CH 25 30 265b 268c
18 AUGUSTINE *Confessions* BK V par 19–21 32c 33b par 25 34b c BK VII par I 2 43b-44a par 7 45a d
19 AQUINAS *Summa Theologica* PART I Q 47 A I ANS 256a 257b Q 50 A I ANS 269b-270a Q 75 A I ANS 378b 379c
23 HOBBES *Leviathan* PART III 172b PART IV 269b 272b
30 BACON *Novum Organum* BK II APH 8 140b
35 LOCKE *Human Understanding* BK IV CH X SECT 8 17 351a 353c passim
53 JAMES *Psychology* 95b 98a 106a 671b [fn 1] 882a 884b

3b Matter as the most imperfect grade of being or reality

7 PLATO *Republic* BK IX 423c-424a
12 AURELIUS *Meditations* BK IX SECT 36 294d 295a
17 PLOTINUS *First Ennead* TR VIII CH 4-5 28c 29c CH 7-8 30c 31c / *Second Ennead* TR IV CH 5 51b d CH 15 16 56c 57c TR V CH 4-5 59c 60c / *Third Ennead* TR VI CH 11 14 113a 116a
18 AUGUSTINE *Confessions* BK XII par 3-8 99d 101b par 15 102b c
19 AQUINAS *Summa Theologica* PART I Q 3 A 8 ANS and REP 3 19d 20c Q 4 A 1 ANS and REP 2 20d 21b Q 5 A 3 REP 3 25a d Q 7 A 2 REP 3 31d 32c Q 14 A 11 REP 3 84c 85c Q 15 A 3 REP 3 93b-94a Q 46 A 1 REP 1 250a 252d Q 84 A 3 REP 2 443d-444d Q 103 A 1 REP 2 528b 529a Q 115 A 1 REP 4 585d 587c
21 DANTE *Divine Comedy* PARADISE XXIX [13 36] 150b-c
35 LOCKE *Human Understanding* BK II CH XXI SECT 2 178c CH XXIII SECT 28 211b d
35 HUME *Human Understanding* SECT XI DIV 123 506a

3c Matter as a fiction of the mind

35 BERKELEY *Human Knowledge* SECT 1-96 413a-431d passim SECT 133 439c-440a
35 HUME *Human Understanding* SECT XII DIV 123 506a
42 KANT *Pure Reason* 85d 91d esp 88b c
44 BOSWELL *Johnson* 134c d

3d The relation of God to matter: the creation of matter and its motions

OLD TESTAMENT *Genesis* 1:1 2
APOCRYPHA *Wisdom of Solomon* 11:17—(D) OT *Book of Wisdom* 11:18
7 PLATO *Timaeus* 448b 449a 450b 451b 458a b 466a b
8 ARISTOTLE *Metaphysics* BK XI CH 6 [1071^b19-32] 601c CH 10 [1075^b16-24] 606c
12 LUCRETIUS *Nature of Things* BK I [146-158] 2d 3a BK V [146-194] 63a c
18 AUGUSTINE *Confessions* BK VII par 7 45a d BK XI par 7 90d 91a BK XII par 3-9 99d 101c par 15 16 102b 103a par 24 26 104c 105b par 28 31 105c 107a par 38-40 108d 110a BK XIII par 45 123a par 48 124a / *City of God* BK XI CH 23 334c 335c
19 AQUINAS *Summa Theologica* PART I Q 8 A 4 ANS and REP 1 37c 38c Q 15 A 3 REP 3 4 93b-94a Q 16 A 7 REP 2 99a d Q 44 A 2 239b-240a Q 45 A 2, REP 2 242d 244a A 8 249b 250a Q 46 A 1 esp REP 1 3 5-6 250a 252d Q 47 A 1 ANS 256a 257b Q 65 A 3 341c 342b Q 66 343d 349d Q 75 A 5 REP 1 4 382a 383b Q 84 A 3 REP 2 443d-444d Q 91 484a 488c Q 92 A 2 REP 2 489d-490c A 4 491b d Q 103 A 1 REP 2 528b 529a Q 105 AA 1 2 538d 540c Q 110 A 2 ANS 565d 566d Q 117 A 3 ANS and REP 2 598c 599b
20 AQUINAS *Summa Theologica* PART I II Q 85 A 6 182d 184a
21 DANTE *Divine Comedy* PARADISE VII [121-148] 116b c XIII [5 -84] 126a b XXIX [13 45] 150b-c
22 CHAUCER *Knight's Tale* [2987 3016] 209a b
30 BACON *Advancement of Learning* 17b d
31 DESCARTES *Discourse* PART V 54d 56b
31 SPINOZA *Ethics* PART I PROP 15 360a 361d PART II DEF 1 373a PROP 2 374a PROP 7 SCHOL 375b-c
32 MILTON *Paradise Lost* BK III [694 735] 150b-151b esp [708 735] 150b 151b BK V [468-505] 185b 186a [577-599] 187b 188a BK VII [59-640] 218b 231a esp [70-108] 218b-219b [192-386] 221b 225b
34 NEWTON *Optics* BK III 541b 543a
35 LOCKE *Human Understanding* BK II CH XXI SECT 2 178c CH XXIII SECT 28 211b-d BK IV CH X SECT 9-19 351b 354c
35 BERKELEY *Human Knowledge* SECT 67-79 426b-428b passim SECT 91-94 430d 431c
35 HUME *Human Understanding* SECT XII DIV 132 509d [fn 1]
46 HEGEL *Philosophy of History* INTRO 156d 157b

4 Matter as an object or condition of knowledge

4a The knowability of matter: by sense, by reason

7 PLATO *Phaedo* 228d 229 / *Republic* BK IX 423c 424a / *Timaeus* 456a 458a
8 ARISTOTLE *Physics* BK I CH 7 [191a 8 11] 266d / *Metaphysics* BK VII CH 15 [1039^b20-1040^a8] 563c 564a BK IX CH 7 [1049 19-$^b1$] 574d 575a / *Soul* BK III CH 4 [429^b 0-430 9] 661d 662c
12 LUCRETIUS *Nature of Things* BK I [265 328] 4b 5a BK I [80-141] 16a d
17 PLOTINUS *First Ennead* TR VI CH 9 31c 32a / *Second Ennead* TR IV CH 10 53b d CH 12 54c 55b
18 AUGUSTINE *Confessions* BK XI par 3-6 99d 100c
19 AQUINAS *Summa Theologica* PART I Q 3 A 3 ANS 16a d Q 14 A 11 84c 85c Q 15 A 3 REP 3 4 93b 94a Q 50 A 1 ANS 269b 270a Q 57 A 1 295a-d Q 66 A 1 REP 1 343d 345c QQ 84-86 440b-464d Q 87 A 1 ANS 465a 466c
20 AQUINAS *Summa Theologica* PART III SUPPL, Q 92 A 1 ANS and REP 12 1025c 1032b
30 BACON *Novum Organum* BK I APH 66 114d 115

(4 *Matter as an object or condition of knowledge* 4a *The knowability of matter by sense by reason*)

31 DESCARTES *Meditations* I II 75a 81d passim VI 96b 103d passim / *Objections and Replies* 229d 230c
31 SPINOZA *Ethics* PART I PROP 15 SCHOL 360b 361d
35 LOCKE *Human Understanding* BK II CH VIII SECT 7 26 134b 138b passim CH XXIII SECT 5 205a b SECT 15 17 208c 209a SECT 2 32 209d 212d BK IV CH III SECT 6 313c 315b SECT 9-17 315c 317c passim SECT 23 27 320a 322a passim CH VI SECT 14 335d 336b
35 BERKELEY *Human Knowledge* SECT 16-24 416a 417d SECT 54 423b
35 HUME *Human Understanding* SECT XII DIV 123 506a
42 KANT *Pure Reason* 186b d
46 HEGEL *Philosophy of Right* PART I par 52 25a-c
48 MELVILLE *Moby Dick* 231a
53 JAMES *Psychology* 140b 145a 502a 503b passim

4b The role of matter in the concepts and definitions of the several sciences the grades of abstraction in physics mathematics and metaphysics

7 PLATO *Timaeus* 455c 458b
8 ARISTOTLE *Physics* BK II CH 2 270a 271a CH 7-9 275b 278a c / *Meteorology* BK IV CH 12 493d-494d / *Metaphysics* BK II CH 3 [995 15 20] 513d BK II CH 3 [998 20-b14] 517a b BK VI CH 1 [10 5b28 1026a6] 547d 548a BK VII CH 10-11 558a 561a CH 15 [1039 20-1040 8] 563c 564a CH 17 565a 566a c BK VIII CH 2 3 566d 568d C 1 6 569d 570d BK X CH 8-9 585b 586c BK X CH 7 [1064 19-28] 592c BK XII CH 9 [1074b 37 1075 2] 605c BK XIII CH 2 [1077b11]-CH 3 [1078 31] 609a d / *Soul* BK I CH 1 [403 15 b19] 632b-d BK III CH 7 [431b13 19] 664b
9 ARISTOTLE *Parts of Animals* BK I CH 1 [641 14 31] 163d 164a
16 PTOLEMY *Almagest* BK I 5b
19 AQUINAS *Summa Theologica* PART I Q 1 A 1 REP 2 3b-4a Q 3 A 3 ANS 16a d Q 18 A 4 REP 3 107d 108c Q 29 A 2 REP 3 163b 164b Q 50 A 2 REP 1 270a 272a Q 75 A 4 381b 382a Q 85 A 1 REP 2 451c-453c
20 AQUINAS *Summa Theologica* PART II II Q 9 A 2 REP 3 424b-425a
30 BACON *Advancement of Learning* 43d-44c / *Novum Organum* BK I APH 51 111c APH 66 114d 115c BK II APH 8 140b
31 DESCARTES *Rules* XII 19a-c XIV 28a 33b / *Objections and Replies* 169c 170a
35 BERKELEY *Human Knowledge* SECT 50 422c SECT 118 131 436b-439c

4c The material conditions of sensation imagination and memory

7 PLATO *Meno* 177b-c
8 ARISTOTLE *Soul* BK I CH 1 [403 5 20] 632a b BK II CH 12 [424a25 b19] 656a d BK III CH 3 [429a4 7] 661b CH 4 [429a29-b4] 661c d / *Sleep* CH 1 [454 1 12] 696b-c
12 LUCRETIUS *Nature of Things* BK II [398 477] 20a 21a [730-864] 24b 26a BK IV [26-268] 44b-47d [324 336] 48c [522-817] 51a 54d
19 AQUINAS *Summa Theologica* PART I Q 75 A 2 ANS 379c 380c A 3 ANS and REP 2 380c 381b Q 76 A 5 ANS 394c 396a Q 78 A 3 ANS 410a-411d Q 84 A 2 ANS 442b-443c A 6 ANS 447c-449b A 7 ANS 449b-450b A 8 REP 2 450b-451b Q 86 A 4 REP 2 463d 464d
23 HOBBES *Leviathan* PART I 49a 51b 62b PART III 172b d PART IV 258b c 261a 262a b
31 DESCARTES *Rules* XII 18b-25b passim / *Meditations* I 96b-103d passim
31 SPINOZA *Ethics* PART II PROP 17 18 380d 382b
34 NEWTON *Optics* BK III 518b 519b 522a
35 LOCKE *Human Understanding* BK II CH I SECT 23 127b CH VIII SECT 4 133d CH X SECT 5 142a b SECT 10 143c d CH XXIX SECT 3 234b c CH XXXIII SECT 6 249a b
35 BERKELEY *Human Knowledge* SECT 18 20 416b-417a SECT 25 417d-418a SECT 102 432d 433a
35 HUME *Human Understanding* SECT XII DIV 123 506a
45 LAVOISIER *Elements of Chemistry* PART I 14a
49 DARWIN *Origin of Species* 85d 87a / *Descent of Man* 568d 569a
53 JAMES *Psychology* 2b 3a 13a 19b esp 15b-17b 19a b 26b-42a 49b-50a 98b 106b passim 348a 359a esp 348a, 358a b 367a 373a esp 368b 369a 370a b 427b 433a esp 428b-430a 453a 455b-457a 459a-479a passim esp 460a 464a 469a 497a 501b 520a 521a 758a 759a
54 FREUD *Interpretation of Dreams* 351c 352d esp 352a b / *Beyond the Pleasure Principle* 646b 648a esp 646c d 647d 648a

4d The material conditions of thought the relation of matter to the existence and acts of the mind

8 ARISTOTLE *Soul* BK I CH 4 [408b 8 31] 638c d BK III CH 4-5 661b-662d CH 7 [431 14 b19] 663d 664b
12 LUCRETIUS *Nature of Things* BK III [94 1-6] 31b 32b BK IV [722-817] 53d 54d
17 PLOTINUS *Fourth Ennead* TR III CH 8 195b-c
19 AQUINAS *Summa Theologica* PART I Q 3 A 1 REP 2 14b 15b Q 7 A 2 REP 2 31d 32c Q 14 A 2 REP 1 3 76d 77d A 11 REP 1 84c 85c Q 50 A 2 ANS 270a 272a Q 55 A 2 ANS and

REP 2 289d 290d Q 57 A 1 REP 3 295a d Q 5 A 5 382a 383b Q 76 385c 399b Q 77 A 5 403d-404c A 8 406b-407a Q 79 A 3 416a 417a QQ 84-88 440b-473a esp Q 84 A 6-Q 85 A 3 447c-457a Q 110 A 2 REP 1 565d 566d Q 117 A 3 598c 599b PART I II Q 22 A 1 720d 721c
20 AQUINAS *Summa Theologica* PART I II Q 85 A 6 182d 184a PART III SUPPL, Q 92 A 1 ANS and REP 10 1025c 1032b
23 HOBBES *Leviathan* PART I 49a d 52b-c 54b-c PART II 162c PART IV 262b
30 BACON *Novum Organum* BK I APH 51 111c
31 DESCARTES *Rules* XII 18b 20d XIV XV 28a 33d / *Discourse* PART IV 53b PART VI 61c / *Objections and Replies* 215b-c 229d 230c
35 LOCKE *Human Understanding* BK II CH XXVII SECT 27 227d 228a
42 KANT *Pure Reason* 23a 24a esp 23b 34a b 36b-c 45d-46a 48d-49a 63a 63d 64a 69c 72c 81b 83b 85d 91d 95a d 115b-c 117b 119a 173b-174a 187 -c / *Fund Prin Metaphysic of Morals* 281c 282d / *Practical Reason* 349b 350c esp 350b-c / *Judgement* 542b-543c 570b-572c 604a b
49 DARWIN *Descent of Man* 288c d
50 MARX *Capital* 11b-c
53 JAMES *Psychology* XIIIb XIVa 2b-3b 8a 67a esp 9a 12b 15b-17b 43a-44a 46a-47a, 51b 52a, 53a 54a, 66b 67 69b 73b 82b 84a 93b esp 84 85a 88a 90b 91a 93a 116a 119b esp 119b 151a 153a 291a 295b 367a 373a esp 368a 369 370b-371a 455b-456a 690a b 758a 759 827b 83 a 856b-858a
54 FREUD *Hysteria* 87a / *Interpretation of Dreams*, 154d 155 367b-c 382a-c 384 385a / *Unconscious* 431c d / *Beyond the Pleasure Principle* 646b 649

5 Matter in relation to good and evil

7 PLATO *Phaedo* 224a 226c 231 234c / *Timaeus* 452d-453b 474b-d / *Statesman* 587a 589c
8 ARISTOTLE *Physics* BK I CH 9 [191b35-192a24] 267d 268 / *Metaphysics* BK I CH 6 [988a7 16] 506a b
12 EPICTETUS *Discourses* BK I CH 9 114c 116b
12 AURELIUS *Meditations* BK III SECT 3 260b BK IX SECT 36 294d 295a
17 PLOTINUS *First Ennead* TR III 27b 34a esp CH 3-5 28a 29c CH 7 30d / *Second Ennead* TR IV CH 16 57b c / *Fifth Ennead* TR IX CH 10 250c / *Sixth Ennead* TR VII CH 27-29 334d 336b
18 AUGUSTINE *Confessions* BK V par 9 21 32c 33b BK VII par 1 7 43b-45d par 18 22 49a 50a BK XIII par 45 123 / *City of God* BK XI CH 23 334c 335c
19 AQUINAS *Summa Theologica* PART I Q 3 A 2 ANS 15c 16a Q 4 A 1 ANS and REP 2 20d 21b PART I-II Q 17 A 8 REP 1 692a c
21 DANTE *Divine Comedy* PARADISE I [97 14] 107b d XIII [52-87] 126a b
41 GIBBON *Decline and Fall* 330a b

6 Criticisms of materialism and its consequences

7 PLATO *Sophist* 567a 568a
8 ARISTOTLE *Soul* BK I CH 2-5 633a 641d
9 ARISTOTLE *Parts of Animals* BK I CH 1 [640b5-641 33] 163a 164b
10 GALEN *Natural Faculties* BK I CH 12 172d 173c BK II CH 3 185a C I 6 188c 191a
17 PLOTINUS *Third Ennead* TR I CH 2 78d CH 3 79b-c / *Fourth Ennead* TR VII CH 6-8 194b 197b
19 AQUINAS *Summa Theologica* PART I Q 75 A 1 REP 1 378b 379c Q 84 A 1 ANS 440d 442a A 6 ANS 447 -449b
28 HARVEY *On Animal Generation* 355b d 495c-496d
35 BERKELEY *Human Knowledge* SECT 21 417a SECT 35 419 SECT 50 422c SECT 85-88 429c-430b SECT 92-96 431a d SECT 2 432d-433a SECT 133 439c-440a SECT 141 441a b
42 KANT *Pure Reason* 126c d / *Judgement* 558b 559d 579d 580a 582b c
51 TOLSTOY *War and Peace* BK III 140b 143a c BK X 449b c BK XI 469a-472b BK XI 570d BK XIV 589c 590c 609b EPILOGUE II 678a b 689c 690a 694d 696d
53 JAMES *Psychology* 5a 8b 9a 84a 119b 291a 295b 655b 656 745a b 823a 825a
54 FREUD *New Introductory Lectures* 882b 884c

CROSS REFERENCES

For Other considerations of matter as a principle of change *see* ART 2b BEING 7b(5) CHANGE 2a FORM 1d(1)–1d( ) and for the theory of celestial and terrestrial matter as distinct in kind *see* ASTRONOMY 8a BEING 7b(3) CHANGE 7c(4) WORLD 6a

The conception of matter as potentiality in relation to form as actuality and for the theory of physical substances as composite of matter and form *see* BEING 7b(2) 7c(3) FORM 2c(1)–2c(3) INFINITY 4c MAN 3a MIND 2b ONE AND MANY 3b(4) SOUL 3c

Considerations relevant to the doctrine that matter is the source of numerical diversity or the principle of individuality in material things *see* SAME AND OTHER 1a UNIVERSAL AND PARTICULAR 3

For The conception of matter or extension as a substance or as a mode of substance *see* BEING 7b(4) FORM 2d MAN 3a MIND 2d SOUL 3c

Atomism as a theory of matter and as a materialistic philosophy of nature *see* ELEMENT 5a 5h MIND 2e and for discussions bearing on materialism as a philosophy of nature society and history *see* ELEMENT 5 HISTORY 4a(2) MAN 3c WILL 5c

Matter in relation to mind or body in relation to soul *see* MAN 3a MIND 2a–2e SOUL 3c 3e and for the discussion of immaterial substances spirits or beings which exist apart from matter *see* ANGEL 2 3b BEING 7b(2) ETERNITY 4a FORM 2a 2d GOD 4c MAN 3a(1) MIND 2a SOUL 3a–3c

The theological problems of matter its creation and conservation *see* GOD 7a WORLD 4e–4e(1)

The physical properties of matter or bodies and the laws of their motion *see* ASTRONOMY 8c(3) MECHANICS 4a 5a–5f(2) 6a–6e QUANTITY 5d–5e SPACE 1a–1d and for the problem of the infinity of matter or of an infinite body *see* INFINITY 4a–4b

Matter as an object of knowledge *see* KNOWLEDGE 5a(2)

Matter in relation to sensation and to sensible qualities *see* ELEMENT 5c MECHANICS 4b *QUALITY 1 SENSE 3c(3)*

Matter in relation to thought abstract ideas or definitions *see* DEFINITION 6a FORM 3c IDEA 2g MEMORY AND IMAGINATION 6c(1) MIND 1a(2) SENSE 5a UNIVERSAL AND PARTICULAR 4c

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World* but relevant to the idea and topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collection
II Works by authors not represented in this collection

For the date place and other facts concerning the publication of the works cited consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*

I

AQUINAS *On Being and Essence*
—— *On the Power of God* Q 4
—— *De Natura Materiae et Dimensionibus Interminatis*
DESCARTES *The Principles of Philosophy* PART I 7 8 11–12 62–65 PART II 22–23 PART III 48–102 PART IV 1–27 31–48
HOBBES *Concerning Body* PART II CH 8
BERKELEY *Three Dialogues Between Hylas and Philonous*
KANT *Metaphysical Foundations of Natural Science*
J S MILL *An Examination of Sir William Hamilton's Philosophy* CH 12 13
ENGELS *Ludwig Feuerbach and the Outcome of Classical German Philosophy*

II

EPICURUS *Letter to Herodotus*
ERIGENA *De Divisione Naturae*
JUDAH HA LEVI *Kitab al Khazari*
CRESCAS *Or Adonai* PROPOSITIONS 10–12 16 19–24
SUAREZ *Disputationes Metaphysicae* V (3) X (3) XII (3) XIII–XV XVI (1) XXVI (2) XXXI XXX (4) XXXI (8 10 13) XXXIV (5–6) XXXV (3 6) XXXVI
JOHN OF SAINT THOMAS *Cursus Philosophicus Thomisticus Philosophia Naturalis* PART I QQ 2 3 5 11
DIGBY *The Nature of Bodies*
MALEBRANCHE *De la recherche de la vérité* BK III (II) CH 8 (2)
LEIBNITZ *New Essays Concerning Human Understanding* APPENDIX CH I
VOLTAIRE "Matter" in *A Philosophical Dictionary*
HOLBACH *The System of Nature*
J PRIESTLEY and R PRICE *A Free Discussion of the Doctrine of Materialism and Philosophical Necessity*
SCHOPENHAUER *The World as Will and Idea* VOL III SUP CH 24
BÜCHNER *Force and Matter*
HELMHOLTZ *Popular Lectures on Scientific Subjects* VII
LANGE *The History of Materialism*
B STEWART *The Conservation of Energy*

MAXWELL. *Matter a d Motion*
LOTZE. *Metaphysics* BK II CH 5-6
PLANCK *Das Prin p d Erhaltu g der Energ e*
C S PE RCE *Collected Papers* VOL VI par 238-286
PE RSON *The G armar of S nc* CH 8
MACH. On the Principle of the Conservation of Ene gy in *Popul Scientific Lectu es*
BERGSON *M tter and Memory* CH 4
PLEKHANOV *I Defen e f Materialism*
—— *E says in the History of Materialism*
MEYERSON *Identity and Real ty* CH 4-5 7-8
LEN N *Materialism and Empiriocrit ism*
C SSIRER *Substance and Function* SU IV
WEYL. *Sp ce—Time—M tt r*
WHITEHEA *An Enquiry Concern g the Principles of Natural Knowledge* CH 15
MCTAGGART *The Natt re of Existence* CH 34
STOUT *Mind and Matter*
BROAD *The Mind and Its Place in Nature* CH 4
DESCOQS *Essai cr tique su l hylémorphisme*
G N LEWIS *The Anatomy of Science* ESSAY IV
B RUSSELL *Principles of Mathematics* CH 53
—— *The Problems of Philosophy* CH 2-4
—— *Myst cism and Logic* CH 7
—— *The A lys s of Matter* CH 1-14
MCDOUG LL *Modern Materialism a d Emergent Evolution*
SANTAYANA *Scepticism a d Animal Fa th* CH 19-20
—— *The Realm of Matter* CH 2-3 10
LENZEN *The Nature of Physical Theory* PART IV CH 15
KONINCK *Le problème de l indéterminisme*

Chapter 54 MECHANICS

INTRODUCTION

MECHANICS taken as the name for just one of the physical sciences would merit no place on a small list of basic focal terms But the word mechanics means more than that In the tradition of western thought it signifies a whole philosophy of nature and it connotes a set of fundamental principles under which it has been thought all the physical sciences can be unified

The principles of mechanics have been applied not only in statics and dynamics which are concerned with the action and reaction of bodies at rest or in motion but also in acoustics and optics and the sciences of heat magnetism and electricity They have been extended to astronomical phenomena to constitute what is called celestial mechanics They have been thought to govern the action or motion of invisible particles or waves as well as the familiar bodies of ordinary experience In the range and variety of the phenomena it covers mechanics would *seem to be co extensive with physics* Such at least appears to be its scope at one stage in the development of natural science

We shall pre ently consider the dissatisfaction with the mechanical point of view which causes scientists in our own day to hail the replacement of classical mechanics by the new physics as a great advance in science The intellectual significance of this change can be compared with that earlier revolution in the 17th century when the new natural science founded on the achievements of Galileo Huygens and Newton replaced the physics of Aristotle which had long reigned as the traditional philosophy of nature What Einstein calls the rise and decline of the mechanical point of view thus seems to provide an apt title for the story of three stages in the history of science in only one of which does the whole of physics appear to be dominated by *mechanics*

One way then of understanding the importance of mechanics is in terms of that story Other chapters such as ASTRONOMY CHANGE ELEMENT MATTER PHYSICS SPACE and TIME —and perhaps also CAUSE and HYPOTHESIS— tell part of that story especially the part which turns on the differences between Aristotle s physics (which is neither experimental nor mathematical) and modern physics (which is both) This chapter focuses on issues which fall largely within modern physics—issues belonging to that part of the story which in the great books begins with *Galileo* Huygens and Newton and runs to Fourier and Faraday The story itself does not end there but the point to which Faraday carries it suggests the sequel in Clerk Maxwell and Einstein just as Galileo s point of departure reflects antecedents in Aristotle The great books state the issues sufficiently well though they do not tell the whole story That can be fully documented only by a host of supplementary *scientific classics in* various fields such as the works listed in the Additional Readings

IN MODERN TIMES it is accepted that physics should be both experimental and mathematical No one questions the ideal of unifying the physical sciences and finding the unity in nature s laws But the question is whether that unification can be achieved under the aegis of mechanics and the issue is whether physics should gather its experimental findings together under purely mathematical formulations or should also try to give those mathematical formulae a mechanical interpretation

The issue involves more than a question of scientific method It concerns the ultimate aim of natural science and the kind of concepts it should employ to fulfill this aim Should the *scientist seek to do no more than describe the*

phenomena of nature in terms of the simplest and most universal mathematical relations? Or should he go beyond description to an explanation of the phenomena in terms of their causes?

When the issue is thus stated as a choice between being content with description or striving for explanation it appears to be broader than the question whether physics should or should not be mechanical Even granted that explanation is desirable does it necessarily follow that physical explanation must employ the principles and concepts of mechanics? Aristotle s physics it can be argued provides a negative answer His various physical treatises represent a natural science which tries to explain the phenomena without doing so mechanically just as it tries to describe the phenomena without doing so mathematically

That the connection of these two features of Aristotle s physics is not accidental seems to be indicated by the conjunction of their opposites in modern physics When in the 17th century the physicist describes natural phenomena in mathematical terms he explains them—if he tries to explain them at all—in mechanical terms The laws of Mechanics writes Descartes are the laws of Nature Huygens opens his *Treatise on Light* by referring to optics as the kind of science in which Geometry is applied to matter but he at once expresses the desire to advance this branch of mathematical physics by investigating the origin and the causes of the truths already known in order to provide better and more satisfactory explanations Such explanations he thinks will be found only if we conceive the causes of all natural effects in terms of mechanical motions He declares it his opinion that we must necessarily do this or else renounce all hopes of ever comprehending anything in Physics

Galileo and Newton as will be noted do not unqualifiedly share Huygens view that it is proper for the mathematical physicist to inquire about causes But they would agree that if any explanation is to be given for laws of nature expressed in mathematical form one or another type of mechanical hypothesis would be required to state the causes Postponing for the moment the cons deration of whether the investigation of causes belongs to mathematical physics let us examine what is involved in giving a mechanical explanation of anything and why this type of explanation tends to occur in the causal interpretation of mathematically formulated laws of nature

Two points seem to constitute the essence of mechanical theory Both are fundamental notions and both are philo ophical in the sense that they do not seem to result from the findings of experimental research The first point is an exclusive emphasis upon efficient causes which means the exclusion of other types of causes especially final and formal causes from mechanical explanation As the chapter on CAUSE indicates efficient causality consists in *one thing acting on another* But not every sort of action by which one thing affects another is mechanical According to the doctrine an efficient cause is mechanical only if it consists in a moving body acting on another by impact or if it consists in a force exerted by one body to cause motion in another or to change its quantity or direction The notion of a force which does not work through the impact of one moving thing upon another raises the problem of action at a distance to which we shall return subsequently

The second fundamental point is an exclusive emphasis upon quantities Mechanical explanation makes no references to qualities or other attributes of things Paradoxically this point is sometimes expressed in terms of a distinction between primary and secondary *qualities* but as the chapters on QUANTITY and QUALITY point out the primary qualities are all quantities According to Locke they are solidity extension figure motion or rest and number according to Newton the universal qualities of all bodies whatsoever are extension hardness impenetrability mobility and inertia Others like Galileo and Descartes give still different enumerations but the point remains that the only attributes of bodies which have mechanical significance are measurable quantities Such secondary qualities for example as colors and tones belong to the physical world (as it is mechanically conceived) only by reduction to the local mot on of particles or waves having certain velocities lengths or other quantitative attributes

We need not be concerned here with what sort of reality is assigned to secondary qualities or how their presence in experience is accounted for These problems are discussed in other chapters such as QUALITY and SENSE However they are solved the philosophy of mechanism excludes from the physical world whatever does not consist in or cannot be reduced to quantities of matter (or mass) motion or force and such related quantities as those of time and space (or distance)

The two points of mechanical theory are obviously connected for the kind of cause which mechanical explanation employs to the exclusion of all others consists in a quantity of motion or of force Just as obviously mechanical explanation dealing only in quantities and in causes which are quantitatively measurable is precisely the type of explanation which would seem to be appropriate if one felt called upon to give an interpretation of the mathematical relationships which the mathematical physicist formulates as laws of nature These mathematical laws are after all statements of the relations among physical quantities which have been subjected to experimental determination or measurement

AS A PHILOSOPHICAL theory the mechanical view of nature antedates modern physical science The atomistic conception of the world which Lucretius expounds contains both of the fundamental points of mechanism—the doctrine of primary and secondary qualities and the doctrine that all effects in nature are produced by efficient moving causes

The controversy over mechanism is also ancient Aristotle denies both points of doctrine in his criticism of the Greek atomists Democritus and Leucippus and in the exposition of his own physical theories he states an opposite view To qualities and qualitative change he assigns physical reality He explains change in terms of four types of causes not one He does not exclude the mechanical type of cause in his explanation of local motion On the contrary with respect to local motion his theory that a body in motion must be directly acted upon by a moving cause throughout the period of its motion seems to be more mechanical than the modern theory that no cause need be assigned for the continuing uniform motion of a body along a straight line but only for a change in its direction or velocity

What is new in modern times is not the philosophical doctrine of mechanism but the introduction of mechanical explanation into experimental and mathematical physics and the controversy about whether it belongs there or can be defended as useful The so called rise and decline of the mechanical view in modern physics is connected with experimental discoveries and mathematical formulations It is not an alternation between success and failure on the level of philosophical argument concerning the ultimate truth of mechanical conceptions. When these conceptions are rejected it is not for the sake of returning to opposite notions in physical theory such as those of Aristotle but rather because as Einstein says science did not succeed in carrying out the mechanical program convincingly and today no physicist believes in the possibility of its fulfillment

There is a touch of prophecy in the conversation Swift imagines taking place between Aristotle and the physicists of the 17th century According to Swift when Aristotle was confronted with Descartes and Gassendi he freely acknowledged his own mistakes in natural philosophy because he proceeded in many things upon conjecture as all men must do and he found that Gassendi who had made the doctrine of Epicurus as palatable as he could and the *vortices* of Descartes were equally exploded He predicted the same fate to *attraction* whereof the present learned are such zealous asserters He said that new systems of nature were but new fashions which would vary in every age and even those who pretend to demonstrate them from mathematical principles, would flourish but a short period of time and be out of vogue when that was determined

BOTH GALILEO and Descartes re-state the philosophical doctrine which first appears in ancient atomism but both re-state it in a way that suggests its utility for an experimental investigation of nature It is significant that Galileo s statement occurs in the context of his concern with the nature and causes of heat He wishes to explain he writes in *Il Saggiatore* why he thinks that motion is the cause of

heat To do this he finds it necessary to question a prevalent notion which is very remote from the truth —the belief that there is a true accident affection or quality really inherent in the substance by which we feel ourselves heated He denies the physical reality of heat as an inherent quality of bodies on the same ground that he denies the physical reality of other qualities I do not believe he declares that there exists anything in external bodies for exciting tastes smells and sounds but size, shape quantity and motion swift or slow and if ears tongues and noses were removed I am of the opinion that shape quantity and motion would remain but there would be an end of smells tastes and sounds which apart from the living creature I regard as mere words

Descartes statement of the doctrine is bolder perhaps in its suggestion of a mechanical program for physical research Colors odors savors and the rest of such things he writes are merely sensations existing in my thought They differ from the real properties of bodies just as much as pain differs from the shape and motion of the instrument which inflicts it The true physical properties such as gravity hardness the power of heating of attracting and purging consist in Descartes opinion solely in motion or its absence and in the configuration and situation of [bodily] parts

As a philosophical doctrine the mechanical view is not necessarily tied to atomism Descartes opposes atomism as plainly as does Aristotle Furthermore Newton who is an atomist disagrees with both Descartes and the Greek atomists on one fundamental point in mechanical theory The ancient atomists make the actual motion of one particle in collision with another the indispensable cause of a change of motion in the latter Descartes likewise requires one motion to be the cause of another and explains gravity in terms of actual bodily motions Newton rejects Descartes mechanical hypothesis of material vortices as the cause of gravitation He seems to have this in mind and to put Descartes in the same class with Aristotle when he says that hypotheses whether metaphysical or physical whether of occult qualities or mechanical have no place in experimental philosophy

The force of gravity according to Newton is a power of attraction which one body exercises on another without the first being in motion or coming into contact with the second Newton acknowledges the problem of action at-a-distance which his theory raises For the most part he lets it stand as a problem which does not affect the mathematical results of his work But in the Queries he attaches to his *Optics* he suggests by way of solution the hypothesis of an ether as the continuous medium through which gravitational force is exerted In the opinion of later physicists Newton s hypothesis is no less mechanical than Descartes Nor does there seem to be any philosophical grounds for preferring one hypothesis to the other

But Newton s quarrel with Descartes is not on a philosophical issue It turns on which mechanical conception if any at all is to be offered fits best with the mathematical laws of terrestrial and celestial motion which Newton had succeeded in formulating as universal laws of nature Those mathematical laws moreover had the merit of fitting the observed phenomena and so of realizing the scientific ideal of accurate description stated in the most generalized form Newton s triumph over Descartes then is a triumph in mathematical and experimental physics not a triumph in philosophy

Pope s couplet

Nature and Nature s Laws lay h d in Night
God said Let Newton be and all was l ght

records that triumph and celebrates the illumination of nature by the mechanical as well as the mathematical principles of Newton s physics Newton s picture of the world dominates the mind of a century and controls its science Locke speaks of the incomparable Mr Newton and of his never enough to be admired book Hume refers to him as the philosopher who from the happiest reasoning determined the laws and forces by which the revolutions of the planets are governed and directed and even Berkeley who challenges his theories of space time and attraction regrets that he must take issue with the authority of so great a man a man whom all the world admires as the author of a treatise on Mechanics demonstrated and applied to nature

NEWTON'S ACHIEVEMENT is to have accomplished an extraordinary synthesis of all that was good in previous scientific work and a sweeping criticism of all that was considered stultifying That so many and such varied phenomena should be organized mathematically by a theory as simple as Newton's is altogether impressive Equally astonishing is the *predictive power of Newton's laws* and the explanatory power of his mechanics not to mention the technological fruits of the latter in mechanical engineering and the invention of machinery of all sorts Whatever difficulties are implicit in the Newtonian mechanics—subsequently to become with new discoveries more and more perplexing—the scope and grandeur of Newton's book gives mechanics a commanding position with respect to the future of science for at least two centuries

In the century between the publication of Newton's *Mathematical Principles* and the publication in 1787 of Lagrange's *Mecanique analytique* the notion of the mechanical explanation of all the processes of nature writes Whitehead finally hardened into a dogma of science In the next century the mechanical dogma spreads from physics and chemistry throughout the whole domain of natural science—into biology and psychology—and even beyond that into economics and sociology Books bear such titles as *The Mechanistic Conception of Life The Mechanism of Human Behavior Social Statics Social Dynamics* At the end of the 19th century James notes the conquests which are being made on all sides by the mechanical idea Once the possibility of *some* kind of mechanical interpretation is established he writes Mechanical Science in her present mood will not hesitate to set her brand of ownership upon the matter

James himself testifies to the persuasiveness and success of the mechanical dogma though not without some resentment The modern mechanico-physical philosophy of which we are so proud he says because it includes the nebular cosmogony the conservation of energy the kinetic theory of heat and gases etc etc. begins by saying that the *only* facts are collocations and motions of primordial solids and the only laws the changes in motion which changes in collocation bring The ideal which this philosophy strives after he continues is a mathematical world formula by which if all the collocations and motions at a given moment were known it would be possible to reckon those of any wished for future moment by simply considering the necessary geometrical arithmetical and logical implications

Laplace had in fact pictured a lightning calculator who *given the total configuration of* the world at one instant would be able to bring the whole future present to his eyes And James quotes Helmholtz to the effect that the whole problem of physical science is to refer natural phenomena back to unchangeable attractive and repulsive forces whose intensity depends wholly upon distance The solubility of this problem is the condition of the complete comprehensibility of nature

In commenting on this James admits that the world grows more orderly and rational *to the mind which passes from one feature of* it to another by deductive necessity as soon as it conceives it as made up of so few and so simple phenomena as bodies with no properties but number and movement to and fro But he also insists that it is a world with a very minimum of rational *stuff* The sentimental facts and relations he complains are butchered at a blow But the rationality yielded is so superbly complete in *form* that to many minds this atones for the loss and reconciles the thinker to the notion of a purposeless universe in which all the things and qualities men *love* are but illusions of our fancy attached to accidental clouds of dust which will be dissipated by the eternal cosmic weather as carelessly as they were formed

WITH THE 20TH CENTURY a change occurs. The dogma of mechanism may continue *to spread* in other sciences and gain even wider acceptance as a popular philosophical creed but within the domain of the physical sciences certain mechanical conceptions become suspect and a wholesale rejection of classical mechanics (which becomes identified with Newtonian physics) is called for

Einstein for example quotes the passage from Helmholtz that James had cited, in which Helmholtz goes on to say that the vocation of physics will be ended as soon as the reduction

of natural phenomena to simple forces is com plete This *mechanical view* most clearly formulated by Helmholtz, Einstein concedes played an important role in its time but he adds it appears dull and naive to a twentieth century physicist

Einstein reviews the assumptions which physicists had to make in order to construct a mechanical theory of light gravitation and electricity The artificial character of all these assumptions he says and the necessity for introducing so many of them all quite independent of each other was enough to shatter the belief in the mechanical point of view In the attempt to understand the phenomena of nature from the mechanical point of view he continues throughout the whole development of science up to the twentieth century it was necessary to introduce artificial sub stances like electric and magnetic fluids light corpuscles or ether According to Einstein attempts to construct an ether in some simple way have been fruitless but what is more important in his opinion such failures indi cate that the fault lies in the fundamental as sumption that it is possible to explain all events in nature from a mechanical point of view

Does this mean that the contemporary physi cist has found another and better way of ex plaining nature? Is there a non mechanical way of explaining the phenomena which fits the mathematical laws of experimental physics or does discarding mechanics mean relinquishing all efforts to explain nature?

Eddington suggests an answer One of the greatest changes in physics between the nine teenth century and the present day he writes has been the change in our ideal of scientific explanation It was the boast of the Victorian scientist that he would not claim to understand a thing until he could make a model of it and by a model he meant something constructed of le ers geared wheels squirts and other appli ances familiar to the engineer Nature in build ing the universe was supposed to be dependent on just the same kind of resources as any human mechanic The man who could make gravi tation out of cogwheels would have been a hero in the Victorian age Today however Ed dington continues we do not encourage the engineer to build the world for us out of his material but we turn to the mathematician to build it out of his material

We may turn to the mathematician s con struction of the world in his terms but in the tradition of western thought mathematically formulated laws of nature are not with the single exception perhaps of the Pythagoreans regarded as explanations of why things behave as they do or how they work The change from the 19th to the 20th century with respect to our ideal of scientific explanation cannot then be the substitution of the mathematical for the mechanical account of why and how The shift from mechanics to mathematics is rather a shift from explanation as the scientific ideal to the statement of laws which while hav ing maximum generality remain purely de scriptive What Eddington means by building the world out of the material of mathematics seems to be the same as what Galileo means four centuries earlier when he says that the book of nature is written in mathematical language The materials are such symbols as triangles circles and other geometrical figures Without the help of these Galileo writes to Kepler nature is impossible to com prehend

But does the mathematical comprehension of nature mean a causal explanation of it? More explicitly than Eddington Galileo insists that explanation—at least in the sense of stating the causes—is not the business of the mathematical physicist In a passage which cannot be read too often or examined too closely he names three opinions which the philosophers have expressed about the cause of the acceleration of natural motion Some he says explain it by attrac tion to the center others to repulsion between the very small parts of the body while still others attribute it to a certain stress in the sur rounding medium which closes in behind the falling body and drives it from one of its posi tions to another Now all of these fantasies he continues and others too ought to be ex amined but it is not really worthwhile

They ought to be examined by philosophers perhaps but debating them is not worthwhile in those sciences where mathematical demon strations are applied to natural phenomena Perfectly defining the program of mathematical physics Galileo sets himself a limited task

carried with it a doctrine of natural motions to different natural places drawn from the observation of fire rising stones dropping air bubbling up through water Such a doctrine would prevent the search for laws of motion applicable to all bodies and the general character of Aristotle s physics treating qualities as well as quantities seems to have discouraged the application of mathematics even to the study of local motions

The mathematical expression of the laws of motion is Galileo s objective His interest in the new astronomy which affirmed the motion of the earth led him he told Hobbes to the careful study of movements on the earth His aim is simply to describe with precision the motions to be found in a child s play—stones dropped and stones thrown the one the natural motion of free fall the other the violent motion of a projectile It is clear to observation that the motion of a freely falling body is accelerated But though as a mathematical physicist Galileo refrains from asking why this is so he is not satisfied to know simply that it is so He wants to know the properties of such acceleration What is the relation of the rate of increase in velocity to the durations and distances of the fall? How much increase in velocity is acquired and how fast? What is the body s velocity at any given point in the fall? Similarly when Galileo turns to projectiles he wants to know not merely that their trajectory is consistently curvilinear but precisely what curve the path of the projectile describes

Galileo succeeds in answering all these questions without being perturbed by any of the philosophical perplexities connected with space and time nor does he allow questions about the forces involved in these motions to distract him from his purpose to demonstrate everything by mathematical methods With mathematical demonstration he combines observation and experiment and uses the latter to determine which mathematical conclusions can be applied to nature—which principles can be empirically verified as well as mathematically deduced

One of Galileo s principles however seems to outrun ordinary experience and to defy experimental verification In the interpretation of his experiments on inclined planes Galileo expresses an insight which Newton later formulates as the first law of motion sometimes called the law of inertia It declares that every body continues in its state of rest or of uniform motion in a right line unless it is compelled to change that state by forces impressed upon it Though Newton describes his method as one of making experiments and observations and in drawing general conclusions from them by induction the law of inertia seems to be an exception for it is difficult to say as Hume does that we find by experience that a body at rest or in motion continues forever in its present state —that is *unless* it is acted on by some new force

The condition introduced by unless raises Poincare s question Have there ever been experiments on bodies acted on by no forces? If not and if they are impossible then James may be right in saying that the elementary laws of mechanics are never matters of experience at all but have to be disengaged from under experience by a process of elimination that is by ignoring conditions which are always present Because the idealized experiment [which it calls for] can never be performed, the law of inertia according to Einstein can be derived only by speculative thinking consistent with observation

In any case the first law of motion initiates a new departure in physics So far as local motion is concerned Aristotle and his followers look for the cause which keeps a moving body in motion or a stationary body at rest According to Galileo and Newton uniform motion continues naturally without cause Only a change in the velocity or direction of that motion requires a cause such as a force impressed upon it

How radical this innovation is may be judged from its consequences in celestial mechanics which in turn lead to a completely unified dynamics for both celestial and terrestrial motions These advances are the work of Newton s mathematical genius but the ground for them had been laid by the investigations of Galileo Galileo had resolved the curvilinear motion of a projectile into the imparted rectilinear motion and the deflecting pull of gravity This composition of forces—sometimes called the parallelogram law —explains why the path of

the projectile is a parabola The path of the planets in their orbits Kepler had previously shown is another conical curve—an ellipse But Kepler lacking the first law of motion could theorize physically about the cause of the planetary orbits only by looking for a force projected outward from the sun which would sweep around to keep the planets moving in their paths On the other hand a follower of Galil o as Whitehead points out would seek for normal forces to deflect the direction of motion along the curved orbit He would look for a force pulling the planet off its own rec tilinear course inward toward the sun

That is precisely what Newton did When the problem which others had been able to formulate was put to Newton he simply went to his study for the solution He had solved that problem some years before He had found the law of the force which attracting the planets to the sun would produce their elliptical paths and the other proportionalities stated in Kep ler s purely descriptive laws

With that single discovery Galileo s terres trial dynamics becomes a celestial one too and the traditional separation of the heavens from the earth is overcome Newton goes even fur ther He guesses and then shows by arithmetic that the force deflecting the planets around the sun and the moon around the earth is the same force which makes apples fall and stones heavy in the hand He generalizes this insight in his famous inverse square law Every particle of matter attracts every other particle of matter with a force proportional to the mass of each and to the inverse square of the distance be tween them

Accordingly the world can be pictured as one in which material particles each have posi tion in absolute space and a determinate veloc ity The velocity of each particle causes the change of its position and changes in velocity are caused by forces the amounts of which are determined by positions From his laws of motion and this simple law of force Newton is able by mathematical deduction to account for the perturbations of the moon the oblate ness of the earth the precession of the equi noxes the solar and lunar tides and the paths of the comets

But is Newton s law of force as simple as it appears to be at first? Its mathematical mean ing is plain enough and its application to measured phenomena reveals its descriptive scope When we ask however about its physi cal significance we raise difficult questions con cerning the nature of this attractive force and how it operates To call it the force of gravity and to point out that this is a familiar force which everyone experiences in his own person hardly answers the question

GALILEO WOULD NOT have tried to answer it In his *Dialogues Concerning the Two Great Sys tems of the World* one of the characters Sim plicio refers to that manifest cause which everyone knows is gravity To this Salviati replies You should say that everyone knows it is *called* gravity I do not question you about the name he continues but about the es sence of the thing and that he concludes is precisely what cannot be defined

A physicist like Huygens who expects the explanation of natural effects to be expressed in the familiar mechanical terms of bodily impact has other objections I am not at all pleased he writes to Leibnitz about Newton with any theories which he builds on his principle of at traction which seems to me absurd What shocks Huygens is a scandal that Newton him self cannot avoid facing It is the scandal of ac tion at a distance—of the force of gravity be ing propagated instantaneously across great dis tances and producing effects at some remote place but no effects along the way Newton rec ognizes the strangeness of such a force In a letter to Bentley he echoes Huygens protest to Leibnitz That gravity should be innate inherent and essential to matter he says so that one body may act on another at a distance through a vacuum without the mediation of anything else by and through which their ac tion and force may be conveyed from one to another is to me so great an absurdity that I believe no man who has in philosophical mat ters a competent faculty of thinking can ever fall into it

The absurd ty of action-at-a distance seems to be recognized by common sense and philoso phy alike 'No action of an agent Aquinas remarks however powerful it may be acts at a d stance except through a medium and

Kant who regards Newtonian physics as the model of a rational science of nature speaks of *a force of attraction without contact* as a chimerical fancy which we have no right to assume How can Newton avoid this absurdity without violating his rule of method in mathematical physics—not to frame hypotheses?

Newton s dilemma can perhaps be stated in the following alternatives *either* the inverse square law of gravitational attraction is to be treated as a purely mathematical and hence a purely descriptive proposition of great simplicity and generality *or* it must be given physical meaning by a causal explanation of how gravitational force operates On the first alternative Newton can avoid framing hypotheses but the physical meaning of the concepts he employs to state the mathematical law is *then left dark On the second alternative he* can solve the mechanical problem created by such words in his law as attracts and force but only by going beyond mathematical physics into the realm of mechanical hypotheses

Newton s ems to take the first alternative in his *Mathematical Principles of Natural Philosophy* and the second in his *Optics* There he proposes the hypothesis of an ethereal medium to explain the attractive force of gravity Is not this medium he asks much rarer within the dense bodies of the sun stars planets and comets than in the empty celestial spaces between them? And in passing from them to great *distances doth it not grow denser and denser* perpetually and thereby cause the gravity of those great bodies towards one another and of their parts towards the bodies every body endeavoring to go from the denser parts of the medium towards the rare? And thou h this increase of density may at great distances be exceeding slow yet if the elastic force of this medium be exceeding great it may suffic to impel bodies from the denser parts of the medium towards the rarer with all that power which we call gravity

The hypoth sis fits the law of gravitation if as Maxwell points out the diminution of pressure [in the ether] is inversely as the distance from the dense body Newton recognized according to Maxwell that it then becomes necessary to account for this inequality of pressure in this medium and as he was not able to do this he left the explanation of the cause of gravity as a problem for succeeding ages The progress made towards the solution of the problem since the time of Newton Maxwell adds has been almost imperceptible

THE PROBLEM OF the mechanical properties of an ethereal medium occurs in another form in the field of optics Here it is complicated by the *rivalry between two theories of light*—Newton s corpuscular theory and Huygens undulatory *or wave theory* Each involves a mechanical hypothesis—one concerning the motion of particles emitted from the light source and one concerning the wave like propagation of the light impulse throu h a medium Both theories involve the motion of particles In their explanation of the oar which appears bent in the water *both appeal to the action of the particles* in the refracting medium on the light corpuscles *or* the light waves

Both theories furthermore are expressed by their authors in a mathematical form which permits the deduction of quantitative facts like the equality of the angles of incidence and of reflexion the bending of the light ray in refraction according to the law of sines and the recently discovered fact of the finite velocity of light Huygens book gives prominence to the explanation of the strange phenomena of double refraction found in a certain kind of crystal brought from Iceland —Iceland spar But *both theories* seem to be equally competent in dealing with the established facts of reflexion and refraction and the new facts about dispersion

For a century at least their rivalry resembles that between the Ptolemaic and Copernican theories at a time when they seemed equally tenable so far as accounting for the phenomena was concerned Later new discoveries *such as* those by Young and Fresnel tend to favor the wave theory of light but the rivalry continues right down to the present day It remains unresolved at least to an extent which prompts Eddington in reviewing contemporary controversy about the nature of light and electricity to suggest the invention of the word wavicle to signify the complementary use of both particles and waves in the modern theory of radiation

Unlike the rivalry between the Ptolemaic and Copernican systems which seemed for a while to be entirely a matter of different mathematical descriptions of the same phenomena the conflict between these two theories of light involves from the very beginning an issue between *diverse mechanical hypotheses to explain* the phenomena That issue is argued not only with respect to the adequacy of either theory to explain such phenomena as the rectilinear propagation of light and its different behavior in different mediums but it is also debated in terms of the underlying mechanical conceptions As gravitational force acting at a distance raises a mechanical problem which Newton s ether is not finally able to solve so Huygens ether as the medium through which light is propagated in waves raises mechanical problems which if insoluble (as they seem to be) contribute even more heavily to the general scientific scandal of mechanics

The two authors take different attitudes toward *hypotheses and mechanical explanation* Huygens as we have seen begins his book with the express intention to investigate the causes and to express them in terms of mechanical motions Newton on the other hand begins his with a reiteration of his disavowal of hypotheses My design in this book he writes is not to explain the properties of light by hypotheses but to propose and prove them by reason and experiments Nevertheless *Newton s explanation* of how the prism produces from white light the band of colors in the spectrum seems to require the assumption of a distinct kind of light corpuscle for each color and in addition the assumption that although all light particles have the same velocity when they travel together making white light separate particles for different colors are differently refrangible that is differently susceptible to the action of the particles in the refracting medium of the glass

Perhaps only in Newton s somewhat artificially restricted sense of the word hypothesis could these assumptions escape that denomination In any case the existence of Huygens rival theory prevented his escaping a controversy about hypotheses In the Queries attached to his *Optics* he engages in that controversy with an acumen which shows another side of his genius

HUYGENS WAVE THEORY requires what any body would have to call an hypothesis and requires it from the very start It is inconceivable he writes *to doubt that light consists* in the motion of some sort of matter He immediately rejects the notion that light rays consist *in the transport of matter coming to us* from the [luminous] object in the way in which a shot or an arrow traverse the air —if for no other reason because the rays traverse one another without hindrance The similarity between the phenomena of light and the phenomena of sound suggests to him the way that light spreads and causes him to extend the mechanics of sound—conceived as a wave motion—to light

We know that by means of air which is an invisible and impalpable body Huygens argues sound spreads around the spot where it has been produced by a movement which is passed on successively from one part of air to another and that the spreading of this movement *taking place equally on all sides ought* to form spherical surfaces ever enlarging and which strike our ears Now there is no doubt at all that light also comes from the luminous body to our eyes by some movement impressed on the matter which is between the two If in addition light takes time for its passage it will follow that this movement impressed on the intervening matter is successive and consequently it spreads as sound does by spherical surfaces and waves for I call them waves from their resemblance to those which are seen to be formed in water when a stone is thrown into it

Huygens is aware however that the analogy between light and sound is far from perfect If one examines he says what this matter may be in which the movement coming from the luminous body is propagated one will see that it is not the same that serves for the propagation of sound This may be proved he goes on by shutting up a sounding body in a glass vessel from which the air is withdrawn *An alarm clock beating its bell in a* jar without air makes no sound but a jar without air is no less transparent than one with air Since when the air is removed from the vessel the light does not cease to traverse it as before and since waves have to be waves of something and light waves cannot be waves of air they

must be waves of a substance says Huygens which I call ethereal matter

This ether a transparent medium permeating the whole universe proves to be what Einstein calls the *enfant terrible* in the family of hypothetical physical substances Postulated by Huygens in order to explain light mechanically it in turn calls for a mechanical account of its own extraordinary properties Huygens does not avoid this new problem but neither does he undertake to solve it completely

Suppose one takes a number of spheres of equal size made of some very hard substance and arranges them in a straight line so that they touch one another Then says Huygens one finds on striking with a similar sphere against the first of these spheres that the motion passes as in an instant to the last of them which separates itself from the row without one s being able to perceive that the others have been stirred This type of motion in the ether would account for the extreme velocity of light and yet this progression of motion is not instantaneous as the motion of light also is not

Now in applying this kind of movement to that which produces light Huygens continues there is nothing to hinder us from estimating the particles of the ether to be of a substance as nearly approaching to perfect hardness and possessing a springiness as prompt as we choose Beyond this Huygens does not go It is not necessary to examine here he says the causes of this hardness or of that springiness Though we shall ignore the true cause of springiness we still see that there are many bodies which possess this property and thus there is nothing strange in supposing that it exists also in little invisible bodies like the particles of the ether

But difficulties which Huygens did not foresee make his ether more than a strange supposition—almost a mechanical impossibility Huygens had thought that light waves are transmitted in the ether in the way that sound waves are in the air that is longitudinally the direction in which the individual particles vibrate being the same as the direction of the wave motion itself But when in the 19th century it was found that the phenomena of the polarization of light could not be explained by the corpuscular theory but only by the wave theory (thus shifting the scales decisively in favor of the latter) it was also found that the wave theory could explain polarization *only* on the assumption that the motion of the ether particles which produce the light waves is not longitudinal but transverse that is in a direction perpendicular to the waves produced by the vibration of the particles

As Fresnel pointed out at the time the supposition that the vibrations were transverse was contrary to the received ideas on the nature of the vibration of elastic fluids They had all involved as in the case of air as the medium for sound a longitudinal transmission The character of the ether is changed by the requirement that its particles vibrate transversely It ceases to be an air like ether and must be imagined as a jelly like ether

The task which Huygens had postponed—that of giving a mechanical explanation of the ether he had posited in order to state the mechanics of light—becomes in consequence far more difficult if not impossible In their efforts to construct the ether as a jelly like mechanical substance physicists according to Einstein had to make so many highly artificial and unnatural assumptions that they finally decided to abandon the whole program of mechanical explanation

OF NEWTON S TWO objections to the wave theory of light the second by itself seems to create an insuperable difficulty for Huygens ether even before the realization that it must be a jelly like medium

Newton s first objection is that any wave theory is inconsistent with the fact of the rectilinear propagation of light If light consisted in pression or motion propagated either in an instant or in time it would bend into the shadow for he points out pression or motion cannot be propagated in a fluid in right lines beyond an obstacle which stops part of the motion but will bend and spread every way into the quiescent medium which lies beyond the obstacle The waves pulses or vibrations of the air wherein sound consists bend manifestly even though not so much as the waves of water

This objection loses its force when in the

19th century light s bending is experimentally discovered But Newton s other objection gains force when two centuries after he made it a jelly lik density is imposed upon the ether by the experimental facts of polarization This *second objection does not point to the inade quacy of the wave theory* with respect to the phenomena which must be described but rath er calls attention to its inconsistency with ce lestial mechanics

Light travels through inter stellar space But so also do the planets Newton s astronomy ac counts for the motion of the planets with great precision *only on the supposition of no resistance from a medium* To make way for the regular and lasting motions of the planets and comets, he writes, it is necessary to empty the heavens of all matter except perhaps such an ex ceedingly rare ethereal medium as we de scribed above Here he refers to the ether he himself had posited as a possible cause of gravi tational attraction Its resistance he thinks, is *so small as to be inconsiderable* The planets and comets and all gross bodies [can] perform their motions more freely in this ethereal medium than in any fluid which fills all space adequately without leaving any pores Such a dense fluid serves only to disturb and retard the motions of those great bodies and make the frame of nature languish Since it hinders the operations of nature and since there is no evidence for its existence Newton concludes that it ought to be rejected

The next conclusion follows immediately If it be rejected the hypotheses that light consists in pression or motion propagated through such a medium are rejected with it Newton would seem entitled to draw these con clusions because *no matter how slight the den sity of ethereal matter the use of the ether in* the wave theory of light involves some interac tion between the particles of ether and the par ticles of matter Unless such interaction takes place no explanation can be given of the change in the velocity of light when it enters a *medium* like glass or water Since in Newton s universe there is no difference between terres trial and celestial matter Newton cannot ac cept an ether which interacts with the matter of glass or water but does not interact with the matter of the planets

This objection of Newton s pointing to an inconsistency between the kind of ether re quired by the wave theory of light and the un retarded motion of the heavenly bodies ap pears not to have been answered but only waived at the time of the wave theory s as cendancy The famous Michelson Morley ex periment on ether drift later re-opens Newton s penetrating query about the ether But this occurs at a time when physicists are prepared to give up not only the ether but also with it the mechanical explanations of gravity and light which it had brought into conflict with one another

BEFORE THE MECHANICAL dogma runs its course it has a career in other fields of physical inquiry The phenomena of heat magnetism and electricity are explored and explained un der its inspiration The history of these sub jects is marked by a very rash of hypotheses. Each time mechanical explanation is attempted for a new domain of phenomena new sub stances are added

The postulated entities—calorific magneti cal and electric fluids—are unobservable and without weight In Newton s terms they are occult though it must be added they are no more occult than the ether Newton himself postulated to explain gravity or the ether Huy gens postulated to explain light In fact each of these new substances seems to resemble the aeriform or fluid ether just as each is con ceived as the gravitational or optical ether was earlier conceived in the context of the issue of action-at-a-distance as opposed to action by contact They would seem to be unavoidable in a mechanical account of the radiations of heat magnetism and electricity

The phenomena of heat Lavoisier writes are difficult to comprehend without admit ting them as the effects of a real and material substance or very subtle fluid Where fore he continues we have distinguished the cause of heat or that exquisitely elastic fluid which produces it by the term of caloric Lavoisier declares himself unable to determine whether light be a modification of caloric or if caloric be on the contrary a modification of light But in terms of observed effects he does attribute ether like properties to caloric This

subtle matter he says penetrates through the pores of all known substances for there are no vessels through which it cannot escape

The theory of caloric serves its purpose before it gives way to the theory of heat as molecular *motion* a conception which can be integrated with the molecular or kinetic theory of gases The development of the kinetic theory of matter writes Einstein is one of the greatest achievements directly influenced by the mechanical view It is all the more striking therefore that in the opening pages of Fourier s *Analytical Theory of Heat*—wherein he reviews the triumphs of explanation achieved by Newton and his successors—Fourier should so flatly assert But whatever may be the range of mechanical theories they do not apply to the effects of heat These make up a special order of phenomena which cannot be explained by the principles of motion and equilibrium

It is equally striking that Lavoisier seems to have anticipated not only the mechanical theory of heat but the possibility of a purely mathematical treatment of the phenomena We are not obliged to suppose [caloric] to be a real substance he writes it is sufficient that it be considered as the repulsive cause whatever that may be which separates the particles of matter from each other so that we are still at liberty to investigate its effects in an abstract and mathematical manner

The second of these two things is precisely what Fourier proposes to undertake but he disavows any interest in the first namely the explanation of heat in terms of the mechanical separation of particles by repulsion In language which resembles Newton s disavowal of concern with the cause of attraction Fourier declares that primary causes are unknown to us but are subject to simple and constant laws which may be discovered by observation

In another place he writes Of the nature of heat only uncertain hypotheses could be formed but the knowledge of the mathematical laws to which its effects are subject is independent of all hypothesis Fourier s aim therefore with respect to the very extensive class of phenomena not produced by mechanical forces but resulting simply from the presence and accumulation of heat is to reduce the physical questions to problems of pure analysis and to express the most general conditions of the propagation of heat in differential equations He expresses his indebtedness to Descartes for the analytical equations which that mathematician was the first to introduce into the study of curves and surfaces but which are not restricted to the properties of figures and those properties which are the object of rational mechanics These equations he insists extend to all general phenomena and from this point of view mathematical analysis is as extensive as nature itself

This strongly worded statement affirms the mathematical character of nature as the support and justification for a purely mathematical physics If Fourier s remarks about causes and hypotheses are reminiscent of Newton in his mathematical mood how much more is Fourier s faith in pure mathematical analysis reminiscent of Galileo Like Galileo and unlike Newton Fourier never deviates from his indifference to causes and never softens his judgment of the incompetence and irrelevance of mechanics to the subject he is investigating His trust in mathematical analysis which is able by itself to yield and organize physical discoveries not only revives the spirit of Galileo but also seems to have inspired Clerk Maxwell to turn from a mechanical to a mathematical theory of electricity

Certain of Fourier s mathematical achievements such as his theory of dimensions prove useful to Maxwell More important perhaps is the fact that Maxwell s predictions about the propagation of electro magnetic waves, later experimentally verified by Hertz are the result of mathematical analysis With such a demonstration of the power of mathematics to work fruitfully with experiment and *without any aid from mechanical hypotheses* Maxwell gives up the attempt to formulate a mechanics for his equations describing the electro magnetic field He is quite content to let his field theory state the mathematical structure of the phenomena

Between Fourier and Maxwell comes Faraday One of the greatest experimenters in the whole tradition of science Faraday discovers the phenomena whose mathematical structure Maxwell later develops He prepares the way

for Maxwell s application to electricity and magnetism of the method Fourier had prac ticed His speculations concerning the relation of electrical and gravitational force point ahead beyond Maxwell to the possibility of a field theory which might unify all physical phenom ena under a single set of mathematical laws

Faraday sees no incompatibility between ex perimentation and speculation On the con trary he says that as an experimentalist I feel bound to let experiment guide me into any train of thought which it may justify being satisfied that experiment like analysis must lead to strict truth if rightly interpreted and believing also that it is in its nature far more suggestive of new trains of thought and new conditions of natural power Faraday s faith seems to have been amply justified His experi ments not only discovered a stunning number of new facts but the speculations to which they led transformed the whole mode of thinking about electricity and magnetism and to some extent the whole of physics

The Elizabethan Gilbert with his bold and brilliantly handled thesis that the earth is a magnet had made magnetism appear some thing more than a random phenomenon occa sionally met with in nature But not until Faraday s discovery of d amagnetism an nounced in a memoir *On the Magnet c Cond t on of All Matter* would anyone have dared to say that all matter appears to be subject to the magnetic force as universally as it is to the gravitating the electric and the chemical or cohesive forces Of electricity he can only pred ct as the result of his protracted experi mental investigations that it is probable that every effect depending upon the powers of in organic matter will ultimately be found subordinate to it

These remarks indicate the controlling theme of Faraday s researches namely the convertibility and unity of natural forces It seems to have been suggested to him by the discovery that both electrical and magnetic forces obey the same simple inverse square law as the force of gravitational attraction The fact that certain forces obey the same law or that their action can be described by the same equations, would not of itself reveal whether one of these forces is primary or all are de rivative from some other primary force But it would suggest questions to be asked by experi ment

Gilbert compares magnetism and electricity but he is not able to convert one into the other Oersted before Faraday is the first to establish one aspect of their convertibility He shows that an electric current has a magnetic effect Faraday succeeds in showing the reverse—that a magnetic current has electrical power He expresses his fascination with such reversibili ties in his remarks on the electrical torpedo fish Seebeck he writes taught us how to commute heat into electricity and Peltier has more lately given us the strict converse of this and shown us how to convert electricity into heat Oersted showed how we were to con vert electric into magnetic forces and I had the delight of adding the other member of the full relation by reacting back again and con verting magnetic into electric forces So per haps in these organs where nature has pro vided the apparatus by means of which the fish can exert and convert nervous into electric force we may be able possessing in that point of view a power far beyond that of the fish itself to reconvert the electric into the nervous force

Faraday demonstrates still another such re versibility in nature The nature of his discov ery is indicated by the titles of the papers in which he announces it *On the Magnetiz at on of Light and the Illuminat on of Magnet c Lines of Fo ce* and *The Act on of Electric Currents on Light* These papers in his opinion establ shed for the first time a true direct relation and dependence between light and the magnetic and electric forces and he concludes them with an explicit statement of the central theme of all his researches and speculations

Thus a great addition is made he writes to the facts and considerations which tend to prove that all natural forces are tied together and have one common origin It is no doubt difficult in the present state of our knowledge to express our expectation in exact terms and though I have said that another of the powers of nature is in these exper ments directly related to the rest I ought perhaps rather to say that another form of the great power is distinctly and directly related to the other forms

ONE FORM OF the great power remained to be connected with such other forms as those of light heat electricity and magnetism That was the power of gravitational force Faraday comes to this last stage of his speculations concerning the unity of nature s powers in terms of his conception of lines of force and of what later came to be called the field of force

The earliest theories of electricity and magnetism in an orthodox atomistic vein had conceived them as exerting an influence by means of the effluvia which they emitted Newton for example speculates on how the effluvia of a magnet can be so rare and subtle as to pass through a plate of glass without any resistance or diminution of their force and yet so potent as to turn a magnetic needle beyond the glass When electrical conduction is later discovered effluvia are replaced by fluids on the analogy of caloric as the fluid conductor of heat But when Faraday finds that he can induce from on current to another he becomes interested in the dielectric non conducting medium around the circuits He is strongly averse to any theory which involves action at a-distance and so he argues that induction takes place by the action of contiguous particles To support that argument he shows experimentally that electrical induction can turn a corner

From his study of all the phenomena of magnetism Faraday forms the conception of lines of force and concludes that there is a center of power surrounded by lines of force which are physical lines essential both to the existence of force within the magnet and to its conveyance to and exertion upon magnetic bodies at a distance He says of this idea of lines of force that all the points which are experimentally established with regard to [magnetic] action *i e* all that is not hypothetical appear to be well and truly represented by it and he adds Whatever idea we employ to represent the power ought ultimately to include electric forces for the two are so related that one expression ought to serve for both

Subsequently Faraday satisfies himself as to the physical reality of electrical lines of force in addition to the magnetic lines The compulsion of his interest in the unity of nature then drives him to speculate about gravitational force He begins by admitting that in the case of gravitation no effect sustaining the idea of an independent or physical line of force is presented to us as far as we at present know the line of gravitation is merely an ideal line representing the direction in which the power is exerted But encouraged perhaps by Newton s repeated references to the attractions of gravity magnetism and electricity and by Newton s letter to Bentley which he interprets as showing Newton to be an unhesitating believer in physical lines of gravitating force Faraday goes to work experimentally

The report of these researches *On the Possible Relation of Gravity to Electricity* opens with the re statement of Faraday s central theme The long and constant persuasion that all the forces of nature are mutually dependent having one origin or rather being different manifestations of one fundamental power has made me often think of establishing by experiment a connexion between gravity and electricity and so introducing the former into the group the chain of which including also magnetism chemical force and heat binds so many and such varied exhibitions of force together by common relations His experiments he tells us unfortunately produced only negative results but that does not shake his strong feeling of the existence of a relation between gravity and electricity

THOUGH FARADAY FAILS to prove that such a relation exists he does bequeath as a legacy to 20th century physics the problem of a field theory which would embrace both gravitational and electrical force But whereas Faraday conceives the problem mechanically in terms of the physical reality as well as unity of all lines of force in which contiguous particles act on one another those who inherit the problem from him cease to concern themselves with the physical existence of lines of force and their mechanical basis in the action and reaction of bodies Influenced by the amazing generality implicit in Maxwell s field equations they proceed to search for a purely mathematical statement of nature s structure

In the judgment of the 20th century physicist mathematics may at last succeed in doing precisely what mechanics from Newton to Faraday kept promising but forever failing to

do If the unity of nature can be expressed in a single set of laws they will be according to Einstein laws of a type radically different from the laws of mechanics Taking the form of Maxwell s equations a form which appears in all other equations of modern physics they will be he writes laws representing the *structure* of the field

In saying that Maxwell s equations are structure laws and that they provide a new pattern for the laws of nature Einstein means to emphasize their non mechanical character In Maxwell s theory he writes there are no material actors Whereas Newton s gravitational laws connect the motion of a body here and now with the action of a body at the same time in the far distance Maxwell s equations connect events which happen now and here with events which will happen a little later in the immediate vicinity Like the equations which describe the changes of the electromagnetic field our new gravitational laws are according to Einstein also structure laws describing the changes of the gravitational field

The heart of the difference between a structure law and a mechanical law seems to be contained in Einstein s statement that all space is the scene of these laws and not as for mechanical laws only points in which matter or changes are present This contrast between matter and space brings to mind the difference between physics and geometry Yet Einstein s repeated reference to changes in these space structures also reminds us that the electrical and gravitational fields are not purely geometrical but physical as well

The structure laws of the new physics may be geometrical in form, but if they are to have any physical meaning can they entirely avoid some coloring *by the mechanical conceptions* which have been traditionally associated with the consideration of matter and motion? At least one contemporary physicist appears to think that mechanics survives to bury its undertakers After describing the development in which geometry progressively swallowed up the whole of mechanics Eddington observes that mechanics in becoming geometry remains none the less mechanics The partition between mechanics and geometry he continues has broken down and the nature of each of them has diffused through the whole so that besides the geometrisation of mechanics there has been a mechanisation of geometry

According to this view it is not mechanics but *classical* mechanics which the new physics has abandoned The character of the mechanics seems to have altered with the character of the mathematical formulations Field theory dealing with contiguous areas and successive events avoids the problem of action at a distance and also apparently that problem s classical solution in terms of the action of contiguous particles But another sort of mechanics may be implicit in the field equations which connect events in one area with events in the immediate vicinity If those equations had been available to him Newton might have expressed his theory of a variably dense ether—analogous to the modern conception of a variably filled or variably curved space—in terms of structure laws describing the gravitational field

We are left with a number of questions Is the story of mechanics the story of its rise and decline or the story of its changing role—now dominant now subordinate now more manifest now more concealed—at all stages in the development of a physics which is committed to being both mathematical and experimental? Do the status and character of mechanical conceptions change with changes in the form of the mathematical laws which describe the phenomena? Can physics be totally devoid of mechanical insight and yet perform experiments which somehow require the scientist to act on bodies and to make them act on one another? Could a pure mathematical physics have yielded productive applications in mechanical engineering *without the intermediation of mechanical notions of cause and effect?*

Whichever way these questions are answered we face alternatives that seem to be equally unsatisfactory *Either* experimental physics is purely mathematical and proclaims its disinterest in as well as its ignorance of causes *or* physics cannot be experimental and mathematical without also being mechanical and without being involved in a search for causes which are never found

To the layman there is something mysterious

about all this He stands in awe of the physicist s practical mastery of matter and its motions which he naively supposes to depend upon a scientific knowledge of the causes while all the time the scientists protest that the causes remain unknown to an experimental and mathematical physics Mechanical explanations may be offered from time to time but the various forces they appeal to can be understood only from their effects and are nothing more than verbal shorthand for the formulae or equations which express the mathematical laws Yet they remain cause names and seem to stimulate advances in science—both experimental and mathematical—almost as a consequence of the exasperating elusiveness of these hidden causes

Certain philosophers hold a view which suggests that the clue to the mystery may lie in the word hidden Causes exist and we can control them to build machines and explode bombs *but we cannot with our senses catch* them in the very act of causing or perceive the inwardness of their operation If the fact that they are thus unobservable means that they are occult then all causes are occult—not least of all the mechanical type of cause which consists in the impact of one body upon another In the century in which physicists tried to avoid the scandal of forces acting at a distance by postulating mechanical mediums through which one body acted directly on another philosophers like Locke and Hume express their doubts that such causal action is any less occult than Newton had said Aristotle s causes were

The passing of motion out of one body into another Locke thinks is as obscure and unconceivable as how our minds move or stop our bodies by thought The increase of motion by impulse which is observed or believed sometimes to happen is yet harder to understand *We have by daily experience* clear evidence of motion produced both by impulse and by thought but the manner how hardly comes within our comprehension we are equally at a loss in both In Locke s judgment we will always remain ignorant of the several powers efficacies and ways of operation whereby the effects which we *daily see are produced* If scientific knowledge is knowledge of causes then how far soever human industry may advance useful and experimental philosophy in physical things scientifical will still be out of our reach

When we try to observe efficient causes at work what do we see? Hume answers that we only see one thing happening after another The impulse of one billiard ball is attended with motion in the second This is the whole that appears to the *outward* senses Nor can we form any *inward* impression of what takes place at the moment of impact We are ignorant he writes of the manner in which bodies operate on each other and we shall always remain so for their force or energy is entirely incomprehensible

As the chapter on CAUSE indicates Aristotle holds an opposite view of the matter What takes place in efficient causation may be imperceptible but it is not incomprehensible All causes may be occult so far as the senses are concerned but they are not obscure to the intellect But Aristotle would also insist that the action of efficient causes cannot be understood if they are totally isolated from other causes—material formal final A purely mechanical physics in his opinion defeats itself by its basic philosophical tenets which exclude all properties that are not quantitative and all causes except the efficient Only a different metaphysics—one which conceives physical substances in terms of matter and form or potentiality and actuality—can yield a physics which is able to deal with causes and explain the phenomena but such an Aristotelian physics from the modern point of view stands condemned on other grounds It is not experimental It is not productive of useful applications *It is not mathematical* nor is it capable of comprehending all the phenomena of nature under a few simple universal laws

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and pa e numbers of the passages referred to For example in 4 HOMER *Il ad* BK II [265–283] 12d the number 4 is the number of the volume in the set the number 12d ind cates that the pas sage is in section d of page 1

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lower halves of the pa For example in 53 J ES *Psychology* 116a 119b the passa e begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a and b efer to the upper and lower halves of the left ha d side of the page the letters c and d to the upper and lower halves of the right hand s de of the p ge For example in 7 PLATO *Symposium* 163b 164c the passage begins in the lower half of the left hand side of page 163 and ends in the upper half of the ri ht hand side of p ge 164

AUTHOR S D VI IONS One o more of the ma n divisions of a work (such as PART BK CH SECT) are sometimes included in the reference Lne numbers in brackets are g ven in cer tain cases g *Il ad* BK I [265 283] 12d

BIBLE REFERENC S The references are to book chapter and verse When the King James and Douay versions differ in title of book or in the numbering of chapters or verses the King James ve sion is cited first and the Douav ind cated by a (*D*) follo s *e g* OLD TESTA MENT *Nehemiah* 7 45—(*D*) *II Esdras* 7 46

SYMBOLS The abb e iation esp calls the reader s attention to one or more especially relevant parts of a whole r fe ence pass m signifi s that the topic is discussed intermit tently rather than continuously in the work o passage cited

F r additional informat on concerning the style of the references see the Explanation of Reference Style for general guidance in the use of *The Great Ideas* consult the Preface.

The fo ndat ons of mechanics

M tter mas and atoms the primary quali t es of bod es

8 ARISTOTLE *Heavens* K III CH 4 [303 3 b8] 394b d / *G ne a on d C rrupt on* BK I H 2 410d-413c CH 8 423b-425d

10 GAL N *Natu al Faculties* K I H 12 173a b

12 LUCRETIU *Nat re f Th g* K I [146–328] 2d 5a [483–634] 7 8d K II [333–568] 19b-22b

19 AQUINAS *Summ The l g ca* ART I Q 115 A I AN nd R 3 5 585d 587

23 HO BE *Levi th n* PART I 72a d P RT III 172 b R IV 269d

28 GI BER *Lo da e* K II 29c 34b esp 29c 30a

28 GALIL O *Two N w S ie ces* FIRST DAY 134a 153a pas im

30 B CON *Nov um O ganum* K I AP 1 66 114d 115c K I APH 8 140b APH 48 179d 188b

31 DE ARTE *M dit s I* 78c d / *Obj c i o d Repl es* D F VII 130 d 231a 232a

33 PASC L *Vacuum* 367a 368b

34 NEWT N *Pri cipl s* DEF 5a D III 5b BK I OP 73 S HOL 133b-134a BK G N AL SCH L 218a 219 RO 40 CHOL 246 b BK I I RUL II 270b 271a P OP 6 COROL II I 281b ROP 7 281b-282b / *Opt* BK I 479b 485b BK III 520a 522a 528b 531a 543a esp 537a b 541b 542a

34 HUYGEN *Light* CH I 558b 560a CH III 566b 569b CH V 601b 603b

35 LOCKE *Human Understanding* BK II CH IV 129b 131a CH VI I SECT 7 26 134b 138b pass m CH X II SECT 27 150d 154d pas s m CH XX SECT 2 4 178c 179 CH XXIII SECT 7 7 205d 209a passim SECT 22–3 209d 212d CH XXXI SECT 2 239d BK III CH X ECT 15 295a-c

35 B RK LEY *Hum n Knowledge* SECT 9– 8 414d-416c p ss m SECT 50 422 SE T I – 432d-433a

45 LAVOISIE *Elements of Chem try* PR 3b-4a ART I 9a 15c passim esp 9b-c 13a b 16b 41b

45 FOURI R *The ry of H t* 169a 170a

45 FARAD Y *Res a ches in Electric ty* 685d 686c 850b d 855a

53 JAM S *Psychol gy* 68a b

54 FREUD *Na c ssism* 400d 401a

1*b* The laws of mot on inert the me sure of force action nd re ct on

8 AR S OTLE *Physics* BK V II CH 9 [66b 7-267a21] 354b d / *Hea ens* BK III CH 2 [3 1a21 b3] 392c 393b

(1 *The foundations of mechanics* 1b *The laws of motion inertia the measure of force act on and reaction*)

9 ARISTOTLE *Motion of Animal* CH 2 4 233c 235c / *Gait of Animals* CH 3 243d 244a / *Generation of Animals* BK IV CH 3 [768b16 24] 310b-c
12 LUCRETIUS *Nature of Things* BK II [80-99] 16a b [184 250] 17b-18b
16 KEPLER *Epitome* BK IV 894a 895b 899a 900a 905a 906b 933b 934b 936a 937a 938b 9 9a
20 AQUINAS *Summa Theologica* PART III Q 84 A 3 REP 2 985d 989b
23 HOBBES *Leviathan* PART I 50a 72a d PART IV 271d
28 GILBERT *Loadstone* BK II 56b c
28 GALILEO *Two New Sciences* THIRD DAY 209a 210a 224d 225d FOURTH DAY 240a d
30 BACON *Novum Organum* BK II APH 35 36 162a 168d passim APH 48 179d 188b
34 NEWTON *Principles* DEF III 5b LAWS OF MOTION 14a 4a BK II PROP 40 SCHOL 246a b / *Optics* BK III 541b 54 a
35 LOCKE *Human Understanding* BK II CH XXI SECT 2 4 178c 179c CH XXIII SECT 17 09a
35 BERKELEY *Human Knowledge* SECT 111 434d
35 HUME *Human Understanding* SECT I DIV 27 460c SECT VII DIV 57 475d-476b [fn 2]
38 MONTESQUIEU *Spirit of Laws* BK 1b
45 FOURIER *Theory of Heat* 169a b
51 TOLSTOY *War and Peace* EPILOGUE II 695a-c

1c Space and time in the analysis of motion

8 ARISTOTLE *Physics* BK VI 312b d 325d
28 GALILEO *Two New Sciences* THIRD DAY 201a 202a
30 BACON *Novum Organum* BK II APH 45 46 176a 1 9a
33 PASCAL *Geometrical Demonstration* 434a 439b
34 NEWTON *Principles* DEFINITIONS SCHOL 8b 13a BK III GENERAL SCHOL, 370a 371a / *Optics* BK III 528b 529a 542a 543a
35 BERKELEY *Human Knowledge* SECT 110-117 434b-436a
42 KANT *Pure Reason* 24a 29d 74b 76c 160b-163a
45 FOURIER *Theory of Heat* 249a 251b
51 TOLSTOY *War and Peace* BK XI 469a d

2 The logic and method of mechanics

28 GALILEO *Two New Sciences* SECOND DAY 179c d THIRD DAY 200a b 202d 203a
30 BACON *Advancement of Learning* 34b / *Novum Organum* PREF 105a 106d BK I APH 8 107c d APH 50 111b APH 64 114b APH 70 116b-117a APH 82 120d 121b APH 99-100 127b c APH 121 132b-d BK II 137a 195d / *New Atlantis* 210d 214d
31 DESCARTES *Rules* VIII 12b 13a / *Discourse* PART VI 61d 62c
33 PASCAL *Vacuum* 355a 358b passim 365b-366a
34 NEWTON *Principles* 1a 2a BK I PROP 69, SCHOL 130b 131a BK III 269a b RULES 270a 271b GENERAL SCHOL, 371b 3 a / *Optics* BK II 531b 543a b
34 HUYGENS *Light* PREF 551b-552a CH I, 553b 554a
35 LOCKE *Human Understanding* BK IV CH III SECT 16 317a c SECT 25 9 321a 323a passim CH XII SECT 9 13 360d 362d
35 BERKELEY *Human Knowledge* SECT 104 433a b SECT 107 433d-434a
35 HUME *Human Understanding* SECT IV DIV 23 27 459a-460d esp DIV 26-27 460b d SECT VII DIV 57 475d 476b [fn 2]
42 KANT *Pure Reason* 6b c 1/d 18d 3 a 69c 72c esp 71b-72a
45 FOURIER *Theory of Heat* 169a 1 0a
45 FARADAY *Researches in Electricity* 440b d 758a 759c 831a d 850b d 855a,c esp 850b d 851c
49 DARWIN *Origin of Species* 239c
53 JAMES *Psychology* 882a 884b
54 FREUD *Instincts* 412a b

2a The role of experience experiment and induction in mechanics

8 GILBERT *Loadstone* PREF 1a b BK I 6a 7a esp 6d 7a BK II 27b-c
8 GALILEO *Two New Sciences* THIRD DAY 200a b 207d 208a
30 BACON *Advancement of Learning* 16a 33d 34b 42a c
31 DESCARTES *Rules* VIII 12b 13a / *Discourse* PART VI 61d 62c
33 PASCAL *Vacuum* 356a 357a
34 NEWTON *Principles* BK I PROP 69 SCHOL 130b 131a BK III RULE IV 271b GENERAL SCHOL, 371b-372a / *Optics* BK I 379a BK III 542a 543a b
34 HUYGENS *Light* CH I 553a
35 LOCKE *Human Understanding* BK IV CH III SECT 16 317a c SECT 25 29 321a 323a passim CH XI SECT 9-13 360d 362d
35 BERKELEY *Human Knowledge* SECT 58-59 424a b SECT 104 433a b SECT 107 433d 434a
35 HUME *Human Understanding* SECT I DIV 24 27 459b-460d esp DIV 26 460b c SECT II DIV 5 475d-476b [fn 2]
42 KANT *Pure Reason* 6b c 227b c
45 LAVOISIER *Elements of Chemistry* PREF 1c-2b PART I 23c PART III 8 b-c
45 FOURIER *Theory of Heat* 175b 181b 184a
45 FARADAY *Researches in Electricity* 385b-c 440b d 467a b 607a c 659a 774d 775a
53 JAMES *Psychology* 864a

2b The use of hypotheses in mechanics

12 LUCRETIUS *Nature of Things* BK V [509–533] 67d 68a
28 GALILEO *Two New Sciences* FOURTH DAY 240d 241c
33 PASCAL *Vacuum* 367a 370a
34 NEWTON *Principles* BK III RULE IV 271b GENERAL SCHOL 371b 372a / *Optics* BK I 379a BK III 528b 543a
34 HUYGENS *Light* PREF 551b 552a
35 LOCKE *Human Understanding* BK IV CH III SECT 16 317a-c CH XII SECT 12 13 362a d
35 BERKELEY *Human Knowledge* SECT 50 422c SECT 1 5 106 433b d
35 HUME *Human Understanding* SECT VII DIV 57 475d-476b [fn 2]
36 SWIFT *Gulliver* PART III 118b 119a
42 KANT *Pure Reason* 227b-c
45 LAVOISIER *Elements of Chemistry* PART I 9d 10b
45 FOURIER *Theory of Heat* 181b 184a
45 FARADAY *Researches in Electricity* 467a b 607 c 758a 759c 777d 778c 850b d 855a c esp 850b d 851c
49 DARWIN *Origin of Species* 239c
53 JAMES *Psychology* 884a b
54 FREUD *Narcissism* 400d 401a

2c Theories of causality in mechanics

12 LUCRETIUS *Nature of Things* BK V [509–533] 67d 68a
28 GALILEO *Two New Sciences* THIRD DAY 202d 203a
31 DESCARTES *Discourse* PART V 59
34 NEWTON *Principles* DEF VIII 7b 8a BK I PROP 69 SCHOL 130b-131 BK III RULE I II 270a GENERAL SCHOL 369b 372a / *Optics* BK III 528b 529 531b 541b 542a
34 HUYGENS *Light* CH I 553b 554a
35 LOCKE *Human Understanding* BK II CH XXI SECT 1 4 178b 179c BK IV CH III SECT 25 26 321a-c
35 BERKELEY *Human Knowledge* SECT 50–53 422c-423a passim SECT 60–66 424b-426a SECT 102 09 432d-434b
35 HUME *Human Understanding* SECT IV DIV 24 27 459b-460d esp DIV 26 460b c SECT VII DIV 55 474c d DIV 56–57 475a d esp DIV 57 475d [fn 2] SECT VII DIV 64 478d
36 SWIFT *Gulliver* PART III 118b 119
45 FOURIER *Theory of Heat* 169a 183a b
51 TOLSTOY *War and Peace* EPILOGUE II 687d 695b c
53 JAMES *Psychology* 885b 886a

3 The use of mathematics in mechanics the dependence of progress in mechanics on mathematical discovery

8 ARISTOTLE *Posterior Analytics* BK I CH 9 104b d CH 13 [78b31 79 16] 108b c / *Physics* BK II CH 2 [194 7 11] 270b c BK VII CH 5 333a d / *Metaphysics* BK XIII CH 3 [1078 5-17] 609b c
11 ARCHIMEDES *Equilibrium of Planes* 502a 519b / *Floating Bodies* 538a 560b / *Method* 569a 592a
14 PLUTARCH *Marcellus* 252a 255a
16 KEPLER *Epitome* BK V 964b-965a
19 AQUINAS *Summa Theologica* PART I II Q 35 A 8 ANS 779c 780c
23 HOBBES *Leviathan* PART I 72a d 73b PART IV 268c d
28 GALILEO *Two New Sciences* FIRST DAY 131b 132a 133b SECOND DAY FOURTH DAY 178a 260 c
30 BACON *Advancement of Learning* 46b-c
31 DESCARTES *Rules* IV 7a XIV 31c d / *Discourse* PART I 43b-c PART III 50d / *Objections and Replies* 169c 170a / *Geometry* BK II 322b 331a
34 NEWTON *Principles* 1a 2a DEF VI I 7b 8a BK I PROP I 17 and SCHOL 32b 50a PROP 30–98 and SCHOL 76a 157b esp PROP 69 SCHOL 130b 131a BK II 159a 267a BK III 269a b
35 HUME *Human Understanding* SECT IV DIV 27 460c d
36 SWIFT *Gulliver* PART III 94b 103a
42 KANT *Judgement* 551a 552a
45 FOURIER *Theory of Heat* 169a b 172a 173b 175b 177a 182b 184a 249a b
45 FARADAY *Researches in Electricity* 831a d
50 MARX *Capital* 170a c
51 TOLSTOY *War and Peace* BK XI 469a d
53 JAMES *Psychology* 675b 876a b 882a 883a

3a Number and the continuum the theory of measurement

11 EUCLID *Elements* BK V 81a 98b esp DEFINITIONS 5 81a BK VII DEFINITIONS 20 127b BK X PROP I 2 191b 193a PROP 5 9 195a 198b
11 ARCHIMEDES *Measurement of a Circle* PROP 3 448b-451b / *Conoids and Spheroids* PROP 3–6 458b 460b / *Equilibrium of Planes* BK I PROP 6–7 503b 504b
16 PTOLEMY *Almagest* BK I 18b 20b
28 GALILEO *Two New Sciences* THIRD DAY 197b 200a 205b 206c
31 DESCARTES *Rules* XIV 31b 33b / *Geometry* BK I 295a 296b
34 NEWTON *Principles* BK I LEMMA I 25a
42 KANT *Judgement* 551a 552a
45 FOURIER *Theory of Heat* 183a b
51 TOLSTOY *War and Peace* BK XI 469a d

3b The geometry of conics the motion of planets and projectiles

11 ARCHIMEDES *Quadrature of the Parabola* 527a 537b
11 APOLLONIUS *Conics* 603a 804b
16 KEPLER *Epitome* BK V 975a 979b
28 GALILEO *Two New Sciences* SECOND DAY 191c 195c FOURTH DAY 238a 260 c passim, esp 238b 240

9 ARISTOTLE *Parts f An mals* BK I CH I [64 b 5-641 19] 163a 164a / *Motion of Animals* CH 7 [7 1b1 3] 236d 237b CH 8 [702a22]-CH 10 [03b1] 237c 239a / *Ga t of Animals* 243a 252a c / *Generation of A mals* BK II CH I [734b3 20] 275a b CH 5 [741b5 10] 282c
10 GAL N *Nat r l Facult es* BK I CH 12 BK II CH 8 172d 195c esp BK I CH 12 172d 173c K II C I 3 185a CH 6 188c 191a BK III CH 14 15 213b 214c
12 LUC ETIUS *Nature of Things* BK II [865-1022] 26a 28a BK III [94-869] 31b-41a BK V [783-836] 71b-72a
23 HOBB S *Leviath an* INTRO 47a b
28 H RVEY *On A im l Generat on* 355b d 495c 496d
31 DES RTES *D course* PA T V 56a 60b
34 NEWTON *Opt cs* BK I 384b 385b 428a b BK III 518b 519b 522a
35 LOCKE *Human U dersta d ng* K II CH IX S CT II 140b-c CH X SECT 10 143c d C I XI SECT II 145d 146 CH XXVII SECT 5 220b-c BK IV CH III SECT 25 321a b
38 ROUSSEAU *I equal ty* 337d 338a / *Pol tical Eco omy* 368d 369a
42 KANT *Judgement* 571c 572a 575b-578a 578d 582c
45 LAVO SI R *Elements of Chemistry* PART I 14a
45 FARAD Y *Researches in Electricity* 440b d 540a 541a c
49 DARW N *Origin f Species* 89b-c
51 TOLSTOY *War d Peace* BK X 449b c E ILOGUE II 689c 690a
53 JAMES *Psychology* 5a 6b 9a 17b 44a 52a 68 71a 95b 98a
54 FREUD *I st cts* 412 414c / *Beyo d the Pleasu e Principle* 651d 657d pas im e p 651d 652d 659d 661c esp 660a / *Ego and Id* 708d 709b 711c d

5 The b s c phenomen nd problems of me ch n cs st tics and dynam cs

5 S mple mach nes the b l nce and the lever

8 ARISTOTLE *Phys cs* BK VI CH 4 [255a20-22] 339d
10 H O RA S *F ct res p* 31 87
11 ARCHIMEDES *Eq l br um of Planes* K I POSTUL T I 3 502a 6 502b PROP I-3 502b 503a PR 6-7 503b 504b
14 P UT RCH *Ma cell s* 252 d
16 K PLER *Ep tome* K IV 933b-934b K V 970b 972
28 GA I EO *Two New S i ces* S COND DAY 178b 180c TH RD DAY 209a 210a FOURTH D Y 258 d
33 PAS L *Eq il brium f L i ids* 390 394b
34 NEWT N *Pri ciples* O OL II 15a 16b LAWS O M TION S HO 23 24a
35 HUME *H man Understand g* SECT IV DIV 27 460
50 MARX *C p ta l* 181a

5b The equilibrium and motion of fluids buoyancy the weight and pressure of air the effects of a acuum

8 ARISTOTLE *Heavens* BK IV CH 6 404d-405 c
10 GALEN *Natural Faculties* BK I CH 16 181a d BK II CH I 2 183b d 184c CH 6 188c 191a BK III CH 14 15 213b 214c
11 ARCHI IEDES *Floating Bodies* 538a 560b
28 GALILEO *Two New Sciences* FIRST DAY 135b-138b 163a 166c
30 BACON *No um Organum* BK II APH 48 180a
33 PASCAL *Vacuum* 359a 365b / *G eat Experi ment* 382a 389b / *Equ librium of Liquids* 390a 403a / *W eight of Air* 403a 429a
34 N VTON *Principles* BK II PRO 19 3 and SCHOL 194b 203a PROP 36 226a 231b HY POT IESIS PROI 53 and SCHOL 259a 267a K III PROP 41 3 6b 357b / *Optics* BK III 518a b
35 LOCKE *H man Understand ng* BK II CH XXIII SECT 23 24 209d 210c
45 LAVOISIER *Elements of Chem stry* PART I 10c 12d 15c 16d PART III 88d 89d 96b 99a

5c Stress stra n and elasticity the strength of materials

28 GA ILEO *Tw N u Scien s* FIR T DAY 131a 139c SECOND DAY 178a 196d passim
30 BACON *Novum Org num* BK II APH 48 180a d 187d
34 N WTON *Principles* LAWS O MOTION SCHOL, 21b 22a BK II PROP 23 and SCHOL 201b-203a / *Optics* BK III 540b 541a
34 HUYGENS *L ght* CH I 558b 559b
35 LOCKE *Human Understand g* BK II CH XXIII SECT 23 7 209d 211b
45 L VOISI R *Eleme ts of Chem stry* PART I 14c 15c PART I I 96b 99a
45 FOURIER *Theory f Heat* 192a b

5d Mot on void and medium resistance and friction

7 PLATO *T m eus* 460c d
8 ARISTOTLE *Phys c* BK IV CH 6-9 292c 297c / *Hea ens* BK III CH 2 [3 I b3] 392c 393b / *D eams* CH 2 [459a28 34] 703b
12 LUCRETIUS *Nat re of Th ngs* BK I [329 448] 5b 6c [951 05] 12d 14a BK II [42 166] 16d 17a [225 242] 17d 18a BK VI [830-839] 91b c
16 KEPLER *Ep tome* K IV 857a b
20 AQU NA *S mm Th l g ca* PART III Q 84 A 3 E 2 985d 989b
28 G L RT *Load tone* K 110c
28 G LEO *Tu New Sc ces* RST DAY 134a 135b 157b 171b FOURTH D Y 241d 243
30 BACON *No um Organum* BK II A H 8 140b APH 36 167b API 45 186a 187a 187
34 NEWTON *P nc ples* K 159a 267 pas im esp G NERAL SCHOL 211b 219a BK III OP 6 COROL I 281b ROP 284 285a / *Opt cs* K III 521b-522a 527 528b

BK III CH 2 [301 21 ^{b}32] 392c 393b BK IV CH 1 3 399a-402c
12 LUCRETIUS *Natu e of Th ngs* BK I [358 369] 5c BK II [80-108] 16a b [94 96] 18d
16 COPERNICUS *Revolutions of the Heavenly Sphere* BK I 521a
16 KEPLER *Epitome* BK V 970b
19 AQUIN S *Summa Theologica* PART I II Q 26 A 2 ANS 734d 735c
23 HO BES *Leviathan* PART IV 271d
28 GIL ERT *Loadsto e* BK VI 115d 116a
28 GALIL O *Two New Sciences* FIRST DAY 158b-c 160a 164a passim
30 BACON *Novum Organum* BK II APH 24 154d 155a APH 35 163c d AP 1 36 166b c A H 4 172a b
31 DESCARTES *Objections and Replies* 231b 232a
34 NEWTON *Pri ciples* DEF 1 5a K II PROP 24 203a 204a BK III PROP 6 279b 281b ROP 8 282b 283b PROP 20 291b 294b pass m
45 LAVO SIER *Elements of Chemistry* PART III 88d 89d
45 FOURIER *Theory of Heat* 249a 251b
45 F RAD Y *Researches in Electricity* 632a

6 Velocity accelerat on and momentum an gular or rect linear average or instan taneous

8 ARISTOTLE *Physics* BK IV CH 8 [215^a-4 2 6 21] 295 d BK V CH 4 [228 20-229^{a}7] 309b 310 BK VI CH 1-2 312b d 315d BK VII H 4 330d 333a
28 GA IL O *Two Ne v Scie ces* F R T DAY 166d 168a THIRD DAY 197b c 200a 207d 209a 210a 224b 225d FOURTH DAY 240a d 243d 249b
30 BACON *Novum Organum* BK II APH 46 177d 178d
34 NEWTON *P i ciples* DEF II 5b DEF II VI I 7a 8a LA II 14a b CO OL I I 16b-17b LAWS OF MOTION SCHOL 20a 22a K I LEM MA 10 8b 29a L MMA 11 SCHOL 31b 32a PROP 1 COROL 1 33a / *Opti s* BK III 540a 541b
35 H ME *Human U dersta di g* S CT IV D V 27 460c
51 TOLSTOY *War and Peace* BK X 470d-471a BK XIV 589d

6a Fo ce its kinds and its effect

8 ARISTOTLE *Physics* BK VII CH 5 333a d BK VIII CH 1 [266 25 67^{a}2] 353c 354d / *H aven* BK III C 1 2 [301^{b}2 32] 392d 393b
9 A I TOTL *Mot n f An m ls* 1 3 234a c
16 KEPL *Epit me* BK IV 938b 939a BK V 969a 971b
19 AQUINAS *S mma Theolog a* PART I Q 1 5 A 4 RE 1 541c 542a PART Q 23 A 4 726a 727a
20 AQUIN S *Summa Theol gica* P RT I I Q 84 A 3 REP 2 985d 989b
28 GI BE *Lo dsto e* BK I 26d 40b pass m
31 DESC RTES *R l s* IX 15c / *Object ons d Repl es* 231c 232a
34 NEWT N *Principles* DEF III VIII 5b 8a DEF INITIONS SCH L 11a 13a L W II 14a b BK I LE MA 10 28b 29a PROP 6 37b 38b BK III PRO 6 COROL V 281b GENERAL SCHOL 371b-372a / *Opt cs* BK III 531b 541b 542a
35 BERKELEY *Human Knowledge* SECT 103 106 433a d
36 SWIFT *Gull er* PART III 118b 119a
45 FAR DAY *Researches in Electricity* 338a b 514d 532a 595a 603d 646b 655d 670a 674a 685d 686b 817a 818d 819b d 850b d 855a c esp 855a c
54 FREUD *Narcissism* 400d 401a

6d(1) The relat on of mass and force the law of uni ersal gravitation

16 KEPLER *Epitome* BK IV 910b
28 GILBERT *Loadst ne* BK II 51c 52c
30 B CON *Novum Organum* BK II APH 24 154d 155a APH 36 166b c APH 40 170c 173d
31 DESC TES *Objections and Replies* 231c 232a
34 NEWTON *P inciples* BK I PROP 69-93 and SCH OL 130a 152b esp PROP 75 76 134b 136a BK III PROP 1-7 276a 282b esp PROP 7 281b 282b GENERAL SCHOL 371b / *Opt cs* BK III 531b 543a esp 541b 542a
35 BERKEL Y *Human Knowledge* SECT 10 106 433a d
35 HU E *Human Understand ng* SECT VII DIV 57 475d [fn 2]
45 FARADAY *Resea ches in Electricity* 850b d 855a c esp 855a c
49 D RWIN *Orig n f Sp cies* 239c
51 TOLSTOY *War and Peace* EPIL GUE II 695c
54 FR UD *Narcissism* 400d 401a

6d(2) Act on at a distance the field and med um of fo ce

8 A STOTLE *Physics* BK V II CH 10 [66^{b}27-267^{a}21] 354b d / *Heavens* BK III C -[301^{b}16-31] 393a b / *Dreams* CH 2 [459^{a}28 34] 703b
12 LUCRETIUS *Nature f Th ngs* BK VI [906-1 89] 92b 94c
16 K PLER *Epitome* BK IV 897b 905a esp 900b 901b 906a b 922 b 934b
19 AQUINA *Summa Theologica* PART I Q 8 A 1 EP 3 34d 35c
28 GILB RT *Lo dstone* BK I 10a c BK II 26d 40b esp 30a 32c 42b-43c 45d-47b 51a-c 54d 55c BK V 102d 104b K VI 112d
28 GALILEO *Two New Scien es* THIRD DAY 202d
30 BACON *Novum O ga um* BK I APH 37 168d 169c APH 45 176a 177c APH 48 183a c 186a
31 D SCARTES *Rules* IX 15c / *D scourse* PART V 55c
34 NEWTON *P ciples* D F V VIII 6 8a BK I PROP 69 SC IOL 130b 131a BK I I GEN RAL SCHO 371b-372 / *Opt s* BK I 507a 516b 520a 522a esp 521a b 531b 542 p m
35 HOME *Huma U derstand g* ECT VII D V 57 475d [f 2]
42 KANT *P e Reas n* 227b

(6d Force its kinds and its effects 6d(2) Action at-a-distance the field and medium of force)

45 Lavoisier *Elements of Chemistry* part i 9b c
45 Faraday *Researches in Electricity* 441a-442b 451a-454a 463d-465d 513d 514c 521a 524a 528c 532a 604b c 631b c 648b d 685d 686c 816b d 819a c 819a d 824a b 832a c 840c 842c 855a c

6d(3) The parallelogram law the composition of forces and the composition of velocities

16 Kepler *Epitome* bk v 969a 970a
28 Galileo *Two New Sciences* third day 224d 225c fourth day 240a d 243d 249b passim
34 Newton *Principles* corol i ii 15a 16b
45 Faraday *Researches in Electricity* 691b 692a 788c 793c 817a b
51 Tolstoy *War and Peace* bk xiii 570d
53 James *Psychology* 105a

6e Work and energy their conservation perpetual motion

28 Gilbert *Loadstone* bk ii 56b c
31 Descartes *Rules* xiii 27c
33 Pascal *Equilibrium of Liquids* 392b 394b
34 Newton *Principles* corol ii 15a 16b laws of motion schol, 23a 24a
45 Faraday *Researches in Electricity* 582b-584a 837b c 837d 840c
53 James *Psychology* 884a

7 The extension of mechanical principles to other phenomena optics acoustics the theory of heat magnetism and electricity

7a Light the corpuscular and the wave theory

8 Aristotle *Soul* bk ii ch 7 [418a26-419b24] 649b 650b
12 Lucretius *Nature of Things* bk iv [364-378] 48d-49a
16 Kepler *Epitome* bk iv 896b 901a 903a 922b 926a passim
17 Plotinus *Fourth Ennead* tr v 183a 189b
19 Aquinas *Summa Theologica* part i q 53 a 3 ans and rep 2 283b 284d q 67 349d 354a q 104 a 1 ans and rep 1 4 534c 536c
20 Aquinas *Summa Theologica* part iii suppl q 92 a 1 rep 15 1025c 1032b
28 Gilbert *Loadstone* bk ii 43 b
30 Bacon *Novum Organum* bk ii aph 36 167a b aph 37 169a c aph 48 185a c / *New Atlantis* 212d 213a
31 Descartes *Discourse* part v 54d 55b
33 Pascal *Vacuum* 366b 367a
34 Newton *Principles* bk i prop 94-98 and schol 152b-157b bk ii prop 41 42 247a 249b prop 50 schol, 257b / *Optics* 377a 544a passim esp bk i 379a bk ii 492a-495b bk iii 525b 531b
34 Huygens *Light* 551a 619b passim esp ch i 553a 563b
35 Locke *Human Understanding* bk iii ch iv sect 10 261b d bk iv ch ii sect 11 13 311c 312b
45 Lavoisier *Elements of Chemistry* part i 10b c
45 Faraday *Researches in Electricity* 595a 607a c 817b c
49 Darwin *Origin of Species* 239c

7a(1) The laws of reflection and refraction

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(7 *The extension of mechanical principles to other phenomena optics acoustics the theory of heat magnetism and electricity*)

7e Electricity electrostatics and electrodynamics

28 GILBERT *Loadstone* BK II 26d 34b
34 NEWTON *Principles* BK III PROP 7 COROL 1 282a GENERAL SCHOL 372a / *Optics* BK III 531b 542a
45 FARADAY *Researches in Electricity* 514d 528c

7e(1) The source of electricity the relation of the kinds of electricity

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Discussions of the role of experiment induction and hypotheses in physical science *see* EXPERIENCE 5a-5c HYPOTHESIS 4b-4d INDUCTION 5 LOGIC 4b PHYSICS 4a-4d SCIENCE 5a-5e and for the physicist s treatment of causes *see* CAUSE 2 5b 6 NATURE 3c(3) PHYSICS 2b SCIENCE 4c

The general theory of applied mathematics or mathematical physics *see* ASTRONOMY 2c MATHEMATICS 5b PHYSICS 1b 3 SCIENCE 5c

Other discussions of the mathematical ideas or operations which are applied in mechanics *see* MATHEMATICS 4a-4d QUANTITY 3d(1) 4c 6b

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Another discussion of mass and weight *see* QUANTITY 5d for another discussion of velocity acceleration and momentum *see* QUANTITY 5c for another discussion of force *see* QUANTITY 5e and for another discussion of the composition of forces *see* OPPOSITION 3d

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World* but relevant to the idea and topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collect on
II Wo ks by authors not represented in this collection

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Chapter 55 MEDICINE

INTRODUCTION

MEDICINE is the name of an art of a science or group of sciences and of a learned profession whose members are profi cient in these sciences and experienced in the practice of the art By derivation it is also the name for curative drugs physics or other rem edies prescribed by the physician The archaic usage of the English word physic as the name for the art practice and profession of what is now generally called medicine suggests what the word s Greek root signifies namely that the physician no less than the physicist is a student of nature

There is one other historic use of medicine which indicates its scope and connections in the western tradition When mediaeval institutions first shaped the university the basic divisions of learning then embodied in its structure re flected *different uses of learning as well as dif* ferences in subject matter The three faculties of medicine law and theology not only disci plined their students in different branches of knowledge but also trained them for distinct applications of knowledge to practice

The faculty of m d cine represented all the natural sciences especially those which have come to be called *biological sciences* just as the faculty of law or jurisprud nce represented all the moral sciences and their later offshoots now called social sciences The doctor of medicine was concerned with knowl dge bear ing on the relation of man to nature as the doctor of laws was concerned with knowledge bearing on the relation of man to man and the doctor of theology with knowledge bearing on the relation of man to God

It is a curious accident that the word doc tor which in origin signified the competence to teach others who might practice in each of these great fields of learning has come in popu lar usage to designate not the teacher but the practitioner and chiefly the practitioner in only one of the learned professions Medicine may not deserve the implied emphasis upon the learning of its practitioners but there would be some truth in granting it the distinction of being the oldest of the profes ions in the sense that it comprises a group of men who not only share a common training in the relevant sciences and arts but who also have adopted a code of practice and obligated themselves to perform a service to their fellow men

The Hippocratic Oath sworn to in the name of Apollo the physician and Aesculapius and Health and all the gods and goddesses is the first explicit formulation of a professional ideal In the collection of writings attributed to Hippocrates *The Law* explicitly indicates as *The Oath* implies that there are intellectual as *well as moral conditions to be fulfilled by those* who would dedicate themselves to the service of health Only those who have satisfied all req uisites for the study of med cine and by dil gent application have acquired a true knowl edge of it shall be esteemed physicians not only in name but in reality

The same high conception of medicine ap*pears in the Bible* We read *in Ecclesiasticus* Honor the physician for the need thou hast of him for the most High hath created him For all heal ng is from God and he shall receive gifts of the king The skill of the physician shall lift up his head and in the sight of great men he shall be praised The most High hath created medicines out of the earth and a wise man will not abhor them The *virtue of these things* is come to the knowledge of men and the most High hath given knowledge to men that he may be honored in his wonders By these he shall cure and shall allay their pains and of these the apothecary shall make sweet confec-tions and shall make up ointments of health

and of his works there shall be no end For the peace of God is over all the face of the earth

FIVE OF THE authors of the great books—Hippocrates Galen Gilbert Harvey and Freud—belonged to the profession of medicine They were major figures in its history Practitioners of its arts they were also contributors to the sciences concerned with health and disease Three others combined medicine with other pursuits Copernicus studied medicine at Padua and devoted considerable time to its practice Locke was Lord Shaftesbury s personal physician James took a medical degree at Harvard after years spent in the biological sciences Still another Rabelais not only studied and practiced medicine but also edited the *Aphorisms of Hippocrates and Galen s little treatise on the medical art* His knowledge of medicine and his observation of its contemporary practices can be readily discerned in his comic exaggerations of anatomical and physiological detail and of regimens of diet or exercise

The discussion of medicine in the great books is not limited to its professors or practitioners Montaigne has many doubts about medical diagnosis and the possibility of charting the causes of disease or the remedies which cure The patient s ignorance permits the physician to claim credit for his successes and to blame fortune for his failures

Montaigne characteristically delights in observing that the doctors disagree He offers as one example of the ancient controversy in physics the following Herophilus lodges the original cause of all disease in the humours Erasistratus in the blood of the arteries Asclepiades in the invisible atoms of the pores Alcmaeon in the exuberance or defect of our bodily strength Diocles in the inequality of the elements of which the body is composed and in the quality of the air we breathe Strato in the abundance crudity and corruption of the nourishment we take and Hippocrates lodges *it in* the spirits There is no great danger he adds, in our mistaking the height of the sun or the fraction of some astronomical *computation* but here where our whole being is concerned tis not wisdom to abandon ourselves to the mercy of the agitation of so many *contrary* winds

Such commentary as this bears more on the history of medicine than on the abiding problems of its science or art which from Hippocrates to Freud have been more generally agreed upon than the theories propo ed for their solution Of similar historical significance are the passages in the great works of history which describe the phenomena of disease as they appeared to contemporary observers the plagues which ravaged Ath ns Rome and London or the maladies which afflicted eminent individuals Poetry as well as history and biography contributes to this record The novels of Tolstoy and Fielding the plays of Shakespeare the tales of Cervantes and Chaucer the Greek tragedies and the Homeric epics furnish evidence of both the constant and the *changing elements in the conception of disease* the vocation of medicine and the social acceptance of the physician

The history of medicine is an *epitome of the* history of the natural sciences The researches of the Hippocratic school initiate specific methods of empirical investigation such as the systematic collection and comparison of observations and the painstaking record of individual ca e histories The fundamental con epts of medical theory reflect the philosophy of nature and of man Conflicting notions of the causes of disease focus major issues in biology such as the controversy in which Galen engages with Asclepiades and Erasistratus in the defense of what he supposes to be Hippocrates and Aristotle s organic view of nature against mech anism and atomism

Medicine moreover provides some of the clearest examples of the interdependence of theory and practice for the rules of the healin art put theories to work and to the test and as the rules are refined or altered by the accumulated experience of particular cases inductive insight lea ds to ne v theoretical generalizations As the work of Dr Harvey illustrates biological science is both the source and the reflection of medical knowledge Medicine also affords Bacon and Descartes the *prime* example of a useful application of the knowledge gained by the new methods they propose

More than engineering or the invention of mechanical utilities medicine represents for them knowledge in the service of mankind

That science shall bear fruit in technolo_gy is not merely to be desired writes Descartes with a view to the invention of an infinity of arts and crafts but principally because it brings about the preservation of health which is without doubt the chief blessing and the foundation of all other blessings in this life It is true that the medicine which is now in vogue contains little of which the utility is re markable but without any intention of de crying it I am sure that there is no one even among those who make its study a profession who does not confess that all that men know is almost nothing in comparison with what re mains to be known

The subsequent history of medicine some of the great documents of which are cited in the list of *Additional Readings* under the names of Jenner Bichat Virchow Claude Bernard and Koch seems to substantiate Descartes proph ecy But it also seems to be true that the major problems of med cal practice are not greatly altered or diminished by the tremen dous increase in our knowledge of the causes of specific diseases and our vast store of well tested remedies

What sort of art medicine is to what extent the physician should let nature run its course with what restraint or prudence the physician should apply general rules to particular cases whether health is better served by the general practitioner treating the whole man or by a specialist treating a special organ how the re lation of the physician to his patient i itself a therapeutic factor and underlies the effective ne s of his skill in all other respects to what extent mind and body interact both in the ori gin and in the cure of disease—these are the problems of medicine concerning which Hip pocrates and Galen can converse with Osler and Freud almost as contemporaries

THE DISTINCTION made in the chapter on ART between the simply productive and the coop erative arts associates med cine with agriculture and teaching and separates these arts which merely help a natural result to come about from the arts which produce an effect that would never occur w thout the work of the artist Plants grow and reproduce without the he p of farmers The mind can discover some truth without the aid of teachers Animals and men can preserve and regain their health with out the care of physicians But without shoe makers or house builders shoes and houses would not be produced

The art of medicine does not produce health in the sense in which the shoemaker produces a shoe or the sculptor a statue These other arts imitate nature by embodying natural forms or functions in materials wherein they do not nat urally arise An art like medicine seems to imi tate nature by cooperating with natural pro cesses It follows the course of nature itself and by working with it enables the natural result to eventuate more surely than it might if art made no attempt to overcome the factors of chance

Socrates expresses this understanding of the physician s art when he uses the metaphor of midwifery to characterize his own method of teaching As it is the mother who labors and gives birth so it is the student who is primarily active in the process of learning The teacher like the midwife merely assists in a natural process which mi_ght be more painful and might po sibly fail without such help The teacher writes Aquinas only brings exterior help as does the physician who heals just as the interior nature is the principal cause of the healing so the interior light of the intellect is the principal cause of knowledge

Health he continues is caused in a sick man sometimes by an exterior principle name ly by the medical art sometimes by an interior principle as when a man is healed by the force of nature Just as nature heals a man by al teration digestion rejection of the matter that caused the sickness so does art The exte rior principle art acts not as a primary agent but as helping the primary a_gent which is the interior principle and by furnishing it with in struments and assistance of which the interior principle makes use in producing the effect Thus the phys cian strengthens nature and em ploys food and med cine of which nature makes use for the intended end

The subord nation of the medical art to na ture seems to be the keystone of the whole structure of Hippocratic medic n It is im plied in the emphasis which Hippocrates places on the control of the patient s regimen espe

cially the elements of his diet the exercise of his body and the general circumstances of his life Even in the treatment of acute diseases Hippocrates looks to the regimen first prescribing changes or special articles of diet

Medicines or drugs perform an auxiliary function Surgery is always a last resort to be used primarily in the treatment of injuries and not to be employed in diseases which will yield to a course of regimen and medication There is an element of violence in surgery which puts it last among the means of an art which should work by cooperating with nature rather than by operating on it And among medicines those are preferable which like ptisan a special preparation of barley water derive their efficacy from properties similar to those of normal nutriment

According to Hippocrates the control of regimen is not only the primary factor in therapy but also the original principle of medicine In the treatise *On Ancient Medicine* he points out that the art of medicine would not have been invented at first nor would it have been made the subject of investigation (for there would have been no need for it) if when men are indisposed the same food and other articles of regimen which they eat and drink when in good health were proper for them and if no other were preferable to these The diet and food which people in health now use would not have been discovered provided it suited man to eat and drink in like manner as the ox the horse and all other animals What other object then has he in view who is called a physician and is admitted to be a practitioner of the art who found out the regimen and diet befitting the sick than he who originally found out and prepared for all mankind that kind of food which we all now use in place of the former savage and brutish mode of living?

The same conception of medicine s relation to nature seems to be fundamental in Galen s thought He attributes to Hippocrates his own reformulation of the insight that the art of healing consists in imitating the health giving and healing powers of nature itself The medical doctrines which he criticizes were based on the atomism of Epicurus They regarded the body as a complex piece of machinery When it gets out of order it needs a mechanic and mechanical remedies to fix it On the contrary it seems to him the living body is an organic unity not an aggregation of atoms or a system of interlocking parts

Nature is not posterior to the corpuscles but a long way prior to them Galen writes Therefore it is nature which put together the bodies both of plants and animals and this she does by virtue of certain faculties which she possesses—these being on the one hand attractive and assimilative of what is appropriate and on the other expulsive of what is foreign Further she skillfully moulds everything during the stage of genesis and she also provides for the creatures after birth employing here other faculties again

Nature according to Galen works not by the external impact of part upon part but by its faculties or powers for the performance of natural functions and the production of natural effects Galen s polemic against the mechanists thus leads him to reverse the usual statement Where Hippocrates looks upon nature as the model for art to follow Galen calls Nature the artist in order to set his view in sharp contrast to all mechanical conceptions Instead of admiring Nature s artistic skill he declares they even go so far as to scoff and maintain that things have been made by Nature for no purpose! Nature Galen holds produces effects according to its powers and in conformity to its needs It seems to work with intelligence and for an end not blindly and by chance The true art of medicine therefore borrows its method from Nature s art

The conception of nature as an artist may be taken metaphorically or literally but the insight controlling the practice of medicine remains the same The physician is a servant not a master of nature Aristotle s doctrine of final causes summarized in the maxim Galen so often repeats—that nothing is done by Nature in vain —furnishes a principle for physiological research as well as the rules of medical art Whether because of faulty observation on his part or because of a failure to apply his own principle Galen leaves to Harvey one of the great discoveries which can be credited to close attention to final causes Always observant of the relation between structure and function,

lways questioning the purpose which bodily rgans serve Harvey establishes the fact that he blood circulates and finds therein the reason or the structure of the heart its motions and ts relation to the lungs

It may also be possible for a principle to be carried to excess Montaigne for example expresses his distrust of medical theory and the physician s remedies by an unqualified trust in nature s own resourcefulness Drugs especially purgatives, do violence to nature Men disturb and irritate the disease by contrary oppositions it must be the way of living that must gently dissolve and bring it to an end The violent gripings and contest betwixt the drug and the disease are ever to our loss since the combat is fought within ourselves and that the drug is an assistant not to be trusted being in its own nature an enemy to our health and by trouble having only access into our condition Let it alone a little the general order of things that takes care of fleas and moles also takes care of men if they will have the same patience that fleas and moles have to leave it to itself

Nor is there any need for an art of medicine when nature can do better by herself We ought to grant free passage to diseases I find they stay less with me who let them alone and I have lost some reputed the most tenacious and obstinate by their own decay without help and without art and contrary to its rules Let us a little permit Nature to take her own way she better understands her own affairs than we The Hippocratic doctrine seems to occupy a middle ground between this view of nature as an unerring artist and the opposite extreme which permits all sorts of tampering and tinkering with the machinery of the body

THE ART OF MEDICINE consists in three things writes Hippocrates the disease the patient, and the physician The physician is the servant of the art and the patient must combat the disease along with the physician With regard to diseases the physician must have two special objects in view to do good and to do no harm

This celebrated summary indicates the two kinds of knowledge which the physician should possess He should know about disease in general so that he can classify diseases according to their special causes their symptoms, and the typical course each seems to take Such knowledge underlies the doctor s diagnosis of the patient s malady That in turn determines his prognosis of the stages through which the illness will run from its onset through various crises or turning points to its *sequelae* or consequences Upon the accuracy of his diagnosis and the certainty of his prognosis may depend the effectiveness of any remedy the physician prescribes in the individual case

But individual cases are seldom completely alike The physician must therefore know the patient as an individual and all the relevant circumstances of his life as well as the particular characteristics of this instance of the disease even though its general characteristics are familiar to him from much experience in the treatment of similar cases The *Book of Prognostics* and the treatise *Of the Epidemics* in the Hippocratic collection seem to combine both these kinds of knowledge They enumerate the symptoms by which diseases can be recognized and their future foretold They also set forth individual case histories from which such generalizations can be drawn

The practice of medicine thus appears to require more than scientific knowledge of health and disease in general and more than general rules of art It requires the sort of experience which can be gained only from actual practice Without prudence born of experience general rules can be misapplied for no general rule in medicine as in law fits all cases alike The most famous of Hippocratic aphorisms conveys a sense of the hazards of medical practice Life is short and Art long the crisis fleeting experiment perilous and decision difficult The physician must not only be prepared to do what is right himself but also to make the patient the attendants and the externals cooperate

To persuade the patient to cooperate is the first maxim governing the physician s relation to his patient Plato contrasts the right and wrong relation between doctor and patient by comparing the practice of the physicians who treated slaves and those who treated free men The slave doctor he says prescribes what mere experience suggests as if he had exact knowledge and when he has given his orders like a tyrant he rushes off with equal assurance

to some other servant who is ill But the other doctor who is a freeman attends and practices upon freemen and he carries his enquiries far back and goes into the nature of the disorder he enters into discourse with the patient and with his friends and is at once getting information from the sick man and also instructing him as far as he is able and he will not prescribe for him until he has first convinced him at last when he has brought the patient more and more under his persuasive influences and set him on the road to health he attempts to effect a cure

In the treatment of mental diseases as Freud points out the proper development and management of the relationship between patient and physician is itself a major factor in psychotherapy It presupposes a profound interest for psychological incidents as well as a personal sympathy for the patient he writes It requires the full consent and the attention of the patients but above all their confidence for the analysis regularly leads to the inmost and most secretly guarded psychic processes Since fears anxieties or other temperamental dispositions on the part of the patient may affect the course of an organic ailment the patient s confidence in the physician and even more generally his emotional response to the physician s character play an important role in the successful treatment of bodily ills as well as of mental or functional disorders

Hippocrates recommends that the physician cultivate prognosis not only for the guidance of his own actions but also for the sake of the patient By foreseeing and foretelling in the presence of the sick the present the past and the future and explaining the omis ions which patients have been guilty of he will be the more readily believed to be acquainted with the circumstances of the sick so that men will have confidence to entrust themselves to such a physician

THE RELATION OF physician and patient raises a question about the organization of the practice of medicine to which opposite answers have been given in both ancient and modern times Herodotus reports a high degree of medical specialization in Egypt Medicine is practised among them on a plan of separation he writes each physician treats a single disorder and no more thus the country swarms with medical practitioners some undertaking to cure diseases of the eye others of the hand others a ain of the teeth others of the intestines and some those which are not local The fact that the next paragraph begins a discussion of funerals can hardly be taken as revealing the attitude of Herodotus toward specialization though his comment on the Egyptian practice does imply a contrast to Greek medicine

One sentence in the Hippocratic Oath— I will not cut persons laboring under the stone but will leave this to be done by men who are practitioners of this work —indicates some division of labor in the organization of Greek medicine But apart from the special tasks and skills of surgery the Hippocratic conception of the physician s work favors th practice of general medicine rather than specialization The man not the disease is to be treated and to treat him well the physician must examine the man as a whole not merely the organ or bodily part in which the disorder seems to be located The Hippocratic formula for getting a case history calls for an inquiry into the background of the individual s life his antecedents his occupation his temperament the patient s hab s regimen and pursuits his conversation manners taciturnity thoughts sleep or absence of sleep and sometimes his dreams what they are and when they occur his picking and scratching his tears From these as well as from the symptoms says Hippocrates we must form our judgment

The defense of general practice against specialization is part of Galen s argument with his adversaries Treatment of the disordered part as if it could be isolated from the living unity of the whole man is to Galen one of the deplorable consequences in medical practice of atomism or mechanism in medical theory

This issue is argued again and again in the history of medicine with each side pressing the advanta es in its favor Montaigne for example states the case for the specialist by analogy with the advantages of specialization in other arts As we have doublet and breeches makers distinct trades to clothe us and are so much the better fitted seeing that each of them meddles only with his own business and has less to

trouble his head with than the tailor who un dertakes them all and as in matter of diet great persons for their better convenience have cooks for the different offices so also as to the cure of our maladies With Freud and the development of a greater awareness of the psychological origin of many bodily dis orders, a new factor enters into the argument It tends to favor the general practitioner who from his acquaintance with the patient as a per son may be better able than the specialist to detect hidden psychological causes

THE CONCEPTION of disease is usually deter mined by the conception of health The ab normality is judged and measured as a devia tion from the norm Hippocrates uses the out ward appearance of man in a healthy condition as the standard for discerning the visible signs of illness The physician he says should ob serve first the countenance of the patient if it be like those of persons in health and more so if like itself for this is the best of all where as the most opposite to it is the worst He should also take note when he finds the patient reclining in a posture which resembles the nor mal disposition of the healthy body To find the whole body lying in a relaxed state is a more favorable sign than to find him upon his back with the hands neck and the legs ex tended

The history of medicine especially on the side of its science and theory if not so much with regard to its art and practice can be told in terms of refinements in the classification of diseases and progressive discovery of their spe cific causes both internal and external predis posing and exciting But the analysis of diseases according to their aetiology and by reference to the typical picture of the disease process leaves unanswered the general question about the nature of disease as a loss of health

Apart from its causes and its symptoms its modes and its patterns what is disease? This is the question of major speculative interest in the tradition of the great books The answers given have a certain uniformity in spite of the vary ing terms in which they are expressed

The humoural hypothesis of ancient medical theory for example conceives health as that condition of the body in which the physiolog cal elements are in a proper proportion or bal ance and in which the various parts or powers function harmoniously with one another As health is harmony or good order in the body so disease consists in imbalance and disharmony— an excess or defect with consequent dispropor tion of the elements or the disorder of con flicting bodily processes

In the *Timaeus* Plato first states this theory in terms of the four physical elements There are four natures out of which the body is com pacted earth and fire and water and air and the unnatural excess or defect of these or the change of any of them from its own natural place into another produces disorders and diseases He then considers the diseases which result from excess or defect of one or another of the four humours—blood phlegm black and yellow bile

The humoural hypothesis which Hippoc rates and Galen share with Plato and Aristotle undergoes many transformations in the history of medicine The four elements or humours are replaced by other physiological factors such as the hormones or internal secretions or the ele ments of modern biochemistry But constant throughout these changing formulations is the conception of health as an equilibrium and of disease as its loss through disorder and dispro portion

This broad conception of health and disease seems to apply to mental as well as bodily ills There is not only a basic continuity between Plato s and Freud s discussion of the bodily ori gin of mental disorders and the psychic origin of physical ailments but the Freudian emphasis upon conflict and disintegration in the neurotic character—milder forms of the schizophrenia or split personality which characterizes in sanity—also appeals to harmony as the princi ple of health The language of modern psych atry which refers to the integrated personal ity or the well balanced and adjusted indi vidual defines the norm or the ideal of mental health

The various kinds and degrees of mental dis order especially those which seem to be n t rely funct on l rather th n org n c represent abnormalities which though they differ in cause symptom and tendency have in com mon some excess or defect in the psychic struc

ture or some unresolved conflict in the nature of man Freud s psychoanaly tic method in the treatment of mental ills places psychotherapy in the main tradition of medical practice for in addition to insisting that the patient shall help to cure himself it is directed toward the resolution of conflict restoring the harmony which is health

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in 4 Ho ier *Il ad* BK II [265–283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the pas sa e is in section d of page 12

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lower halves of the page For example in 53 JAM s *Psycholo y* 116a 119b the passage begi is in the upper half of pa e 116 and ends in the lower half of page 119 When the text is p i ted in two columns the letters a and b refer to the upper and lower halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the page. Fo e ample in 7 PLATO *Sympos m* 163b-164c the passage begins in the lower half f the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR s DIVISIONS One or more of the main divisions of a work (such as PART BK CH s CT) a e sometimes included in the reference line n mbers in brackets are given in certain cases *e g Iliad* BK II [265 283] 12d

BIBLE REFERENCES The references are to book chapter and verse When the King James and Douay version diff r in title of books or in the numbering of chapters or ve es the K ng James version is c ted first and the Douay indicated by a (*D*) follows *e g* OLD TESTA MENT *Nehemiah* 7.45—(*D*) *II Esdras* 7.46

SYMBOLS The abbreviation esp calls the reader s attent on to one or more especially rele ant parts f a hole reference passim si nifies that the topic is discussed intermittently rather than continu usly in the wo ks or passage cited

For add tional nformation concerning the style of the references see the Explanation of Reference Style for g ne al guidance in the use of *Th G t I as* con lt the Preface

The profess on of medicine its aims nd obligations the relation of phys cian to p t ent the place of the phys cian in society

A OCR P IA *Ec lesiasticus* 38 1 15—(*D*) OT *Eccl a tici s* 38 1 15

5 AE CHYLUS *Prometheus Bound* [442–506] 44c 45a esp [478 483] 44d

5 ARI TOPHAN S *Plutus* [400–414] 633d

6 HERODOTUS *Hist ry* BK II 65c BK II 117 118a

7 PLA O *Charm des* 7d 10d 11a / *Lys s* 21d 22d 23a / *Laches* 27c / *P t goras* 55d 56a / *Symp s um* 155d 156b / *Go g as* 261 d 268d 270b 287c 288a / *Rep blic* BK I 298a b 303 304a BK I 335b 338 / *Stat sman* 599a b 600b d 601d 602c / *La vs* BK IV 684c 685a BK IX 745a b / *Se nth Letter* 803c 804b

8 A ISTOTLE *T p s* BK CH 10 [4 33 37] 147d K II CH 2 [110 14 2] 154d CH 3 [1 b 16–19] 155c BK V CH 7 [36b33 137a7] 189a

9 ARI T LE *P ts f A m ls* BK I CH I [639b 16–21] 161d 162a / *Pol t s* BK I CH 9 [1 57b 25 3] 451d [58 14] 452b c 10 [258 23 33] 452b-c K I I CH 6 [278b36–1279a 2] 476b CH II [81b4 1 8 a6] 479d c 6 [1287a32–b3] 485d-486a BK VII CH 2 [1324b 27 3] 528d

10 H PO RAT S *Th O th* XIIIa b / *A cient M dicine* par 1–5 1a 2d p r 7 3a / *Pr g ostics* par 1 19a b / *Regimen in Acute Di eases* par 2 3 26d 27c / *Epidem es* BK I SECT II par 5 46c d / *Fract res* par 36 89a / *A ticul tio s* par 44 105a par 78 119d / *Aphorisms* SECT I par 131 / *The Law* 144a d

10 GAL N *Natural Facult es* BK I C I 14 178d 179a K I CH 10 207b d

13 VIRGI *Aeneid* BK XII [391 397] 364b

15 TACITUS *A nals* BK VI 98d

17 PLOTINUS *Third Ennead* TR I C I 5 96a b

18 A U TINE *Ch stian Doctr ne* K I H 14 627d 628b

22 CHAU R *Prolo ue* [411 444] 166b 167a / *Tale f Mel b us* par o 403a

24 R B A *G g nt and Pantagruel* BK I 29b BK I 76b 124d 125b K I 186a b BK IV 232 233b 234a c

25 MONTAIGNE *Essays* 365b 379a e p 375b d 401b-402c 523c 524 532 b

27 SHAKE P ARE *All s Well That E d W ll* ACT I SC [4 36] 142a C I [7 62] 147d 148b ACT II S I [7 89] 149b 150 SC I [46–57] 151d 152a / *Ma beth* ACT IV C III [40 159] 304d 305a

(1 *The profession of medicine its aims and obligations the relation of physician to patient the place of the physician in society*)

28 HARVEY *Motion of the Heart* 267b d 268d
29 CERVANTES *Don Quixote* PART II 345a 346b
30 BACON *Advancement of Learning* 50c 53d esp 52d 53a
31 DESCARTES *Discourse* PART VI 61b c
36 SWIFT *Gulliver* PART I 3a b PART IV 155b 157a
36 STERNE *Tristram Shandy* 412a-414b
37 FIELDING *Tom Jones* 33c 34c 70c 71b 86a-c 161d 162b
38 MONTESQUIEU *Spirit of Laws* BK XXIX 266a
39 SMITH *Wealth of Nations* BK I 44c
44 BOSWELL *Johnson* 13b c 261a b
47 GOETHE *Faust* PART I [997 1010] 25b [2011-2036] 47b 48a PART I [7345 7348] 180a
49 DARWIN *Descent of Man* 323c d
51 TOLSTOY *War and Peace* BK I 38b d 43d 44a 45b-c BK V 215c d 225c 227a BK VIII 307a-c BK IX 372 373b 374c d BK X 448d 449b-c 464a d BK XI 524c 525a BK XII 533d 534a 535b c
52 DOSTOEVSKY *Brothers Karamazov* BK XII 356d 359c
54 FREUD *Origin and Development of Psycho Analysis* 19d / *Hysteria* 64b c 71d 72b 78b 81c passim 107a-c / *Psycho Analytic Therapy* 125b 127a c esp 127a c / *Wild Psycho Analysis* 128a 130d esp 130b c / *General Introduction* 449a b 451b c 623d 625b esp 624d 625a / *Ego and Id* 713b [fn 1] / *New Introductory Lectures* 866b-c 870d 871a

2 The art of medicine

2a The scientific foundations of the art of medicine the contrast between the empiric and the artist in medicine

APOCRYPHA *Ecclesiasticus* 38 1 15—(D) OT *Ecclesiasticus* 38 1 15
7 PLATO *Charmides* 6d 7b / *Lysis* 17c 18a / *Phaedrus* 136b c / *Gorgias* 261a 262a 280d 281c 287d 288b / *Republic* BK I 303a 304a BK III 337b-c / *Theaetetus* 516a / *Statesman* 601d 602c / *Philebus* 633b c / *Laws* BK IV 684c 685a BK IX 745a b
8 ARISTOTLE *Posterior Analytics* BK I CH 13 [79a10-16] 108c BK II CH 19 [100 3-9] 136c / *Meteorology* BK IV CH 12 493d-494d / *Metaphysics* BK I CH 1 [981 5 24] 499b c / *Sense and the Sensible* CH 1 [436 6-b2] 673b / *Youth Life and Breathing* CH 27 [48 b21 31] 726d
9 ARISTOTLE *Ethics* BK I CH 6 [1097a29-33] 341c CH 13 [1102 15 26] 347c BK II CH 2 [1104 1-9] 349b-c BK III CH 3 [1112 30-b2] 358b-c BK VI CH 1 [1138 25 34] 387b CH 7 [1141 20-34] 390a b CH 10 [1142b34 1143 4] 392b BK X CH 9 [118 b13 28] 435b c / *Politics* BK III CH 11 [1281b40-1282a6] 479d CH 15 [1286 10-15] 484b CH 16 [1287a32 b3] 485d 486a BK VII CH 13 [1331b30 38] 536c / *Rhetoric* BK I CH 2 [1355b26-32] 595b [1356b28 32] 596b c
10 HIPPOCRATES *Ancient Medicine* par 1-8 1a 3b par 12 15 4b 5d par 20 24 7b 9a c / *Airs Waters Places* par 1 9a-c / *Prognostics* par 1 19a b par 25 26 c / *Regimen in Acute Diseases* par 2 3 26d 27c par 11 31d 32a / *Epidemics* BK I SECT II par 5 46c d SECT III par 1 49c d BK III SECT III par 16 59b c / *Surgery* par 1 70b / *Fractures* par 31 87a b / *Articulations* par 10 94d par 58 112d / *Aphorisms* SECT I par 1 131a / *The Law* 144a d
10 GALEN *Natural Faculties* BK I CH 13 175c 177a BK II CH 8-9 191b 199a c esp CH 9 195c 196a
17 PLOTINUS *Second Ennead* TR IX CH 14 74b d
18 AUGUSTINE *City of God* BK XXII CH 24 610c 611a CH 30 618a
19 AQUINAS *Summa Theologica* PART I Q 57 A 3 ANS 297b 298a Q 117 A 1 ANS and REP 1 595d 597c PART I II Q 14 A 4 ANS 679b d
25 MONTAIGNE *Essays* 371c 372b 377a d 450d 451a 523c 524a
28 GILBERT *Loadstone* BK II 27b-c
28 HARVEY *Motion of the Heart* 289d 292a esp 289d 291d 292a / *Circulation of the Blood* 305a d / *On Animal Generation* 376d 377a
30 BACON *Advancement of Learning* 5b c 48d 49b 50c 51d 52b d 53a b 56c 57b / *Novum Organum* BK I APH I 9 107a d APH 64 114b APH 66 114d 115a
31 DESCARTES *Discourse* PART VI 61b c 66d 67a
35 HUME *Human Understanding* SECT V DIV 36 465a d [fn 1]
36 STERNE *Tristram Shandy* 412a-414b
37 FIELDING *Tom Jones* 157a 158a
51 TOLSTOY *War and Peace* BK IX 372a 373b
54 FREUD *Psycho Analytic Therapy* 123b 125a esp 123b 125a / *Wild Psycho Analysis* 128a 130d esp 130b d / *General Introduction* 451b-c 549d 550c 606c d / *New Introductory Lectures* 871d

2b The relation of art to nature in healing imitation and cooperation

6 HERODOTUS *History* BK I I 117a-c
7 PLATO *Symposium* 155d 156c / *Gorgias* 260a 262a / *Republic* BK III 335c 337a / *Timaeus* 475c d / *Statesman* 599a b
8 ARISTOTLE *Physics* BK I CH I [192b8-31] 268b d 269a [193b12 17] 269d 270a CH 2 [194 22 7] 270c CH 8 [199b26-31] 277a / *Metaphysics* BK VII CH 7 [1032b6-29] 555c d CH 9 [1034 8 29] 557b c
10 HIPPOCRATES *Ancient Medicine* par 3 1d 2b par 20 7b d / *Prognostics* par 1 19a b / *Injuries of the Head* par 17 68d 69a / *Surgery* par 15 73b c / *Fractures* par 1 3 74b d 76a /

A i culat ons par 2 3 92a-c par 14 96d 97d par 42 104b-c / *Aph risms* SECT I par I 131a SECT II par 4 132b par 51 133d
17 PLOTINUS *Fourth Ennead* TR IV CH 31 175a
18 AUGUSTINE *Christ an Doctrine* BK II CH 30 651c d
19 AQUINAS *Summa Theologica* PART I Q 117 A I ANS and REP I 595d 597c
20 AQUINAS *Summa Th ologica* PART I II Q 51 A I ANS 12b 13c
24 RABELAIS *Garganti a and Pantagruel* BK III 207c d
25 MONTAIGNE *Es ays* 52c d 368d 369a 369c 370a 528c 529b
27 SHAKESPEARE *K ng Le* ACT IV SC IV [I 15] 272b-c
28 HARVEY *Circulat on of the Blood* 305a d / *O An m l Generat on* 438c
30 BACON *Ad ncement of Lea n ng* 53b d / *N vum Orga um* BK I APH 1-9 107a d
31 DESCARTES *D course* PART VI 61b c 66d 67a
36 STERNE *Trist am Shandy* 195b
37 F ELDING *Tom J ne* 34b 86b-c
38 ROUSSEAU *I equality* 336b-337a
51 TOLSTOY *W a and P ac* BK IX 372a 373b BK X 449b-c
54 FREUD *Origin and D velopment of Psycho An ly* 2a / *Inh bi ons Symptom and Anxiety* 746b-c

The comparison of medicine with other arts and profess ons

7 PLATO *Charm d s* 6d 7b / *Lysis* 17c 18a / *Ph drus* 136b 137c / *Go g a* 260a 262a 268d 270b 282c d 289c d / *Republ c* BK I 298a 299a BK III 337b 338a BK V 361d 362a / *The tetu* 515d 517b 525d / *S phi t* 556d 558d / *Stat m n* 599a 602 / *Pl lebi s* 633b c / *La v* BK IV 684c 685a / *Sev nth Letter* 803 804b
8 AR STOTLE *Top cs* BK I CH 3 144a b BK V C 7 [136b33 137a7] 189a BK VI CH 5 [142b30-143 9] 196b-c / *Phy* BK I C 8 [191 33 b9] 267b BK I C I [19 b23 32] 268d 269a [193b13 19] 269d 270a CH 8 [199b26 3] 277a / *M taphy* BK VII CH 7 [1032 25 b29] 555b d
9 AR STOTLE *Pa t of An mal* BK I CH I [639b 15 24] 161d 162a / *Ethics* BK I CH I [1094 6-9] 339a CH 6 [1096a29-33] 341c CH 7 [1097a 15 23] 342c CH 13 [1102 15 26] 347c BK I CH 2 [1104 1-9] 349b-c BK III CH 3 [I 12 30-b 9] 358b-c BK V CH II [1138 29-b4] 386d 387a BK VI C I [I 38b 5 34] 387b CH 7 [I 41 20-34] 390a b CH 12 [I 43b21 1144 5] 393b-c pass m CH 13 [I 45a6-12] 394d BK X CH 9 [1180b7 I 81b7] 435b-436a / *Pol t cs* BK I CH 9 [1257b 5 30] 451d [1258 10-14] 452b CH 10 [1258 23 33] 452b-c BK II CH 8 [1268b33 37] 464d BK III CH 6 [2 8b36-1279a2] 476b CH II [1281b40-128 6] 479d CH 15 [1286a10-15] 484b CH 16 [1287 32 b3] 485d-486a BK VII CH 2 [1324b27 31] 528d CH 13 [1331b30-38] 536c / *Rheto ic* BK I CH I [1355b9-14] 594d 595a CH 2 [1355b26-36] 595b [1356b28 35] 596b-c
10 HIPPOCRATES *Ancient Med cine* par I 1a b par 9 3b d / *Regimen in Acute D ases* par 3 27a-c / *The Law* par 1-3 144a d
13 VIRGIL *Aen d* BK XII [391 397] 364b
14 PLUTARCH *Lycurgus* 34b / *Pericles* 129b d / *Demetrius* 726a d
17 PLOTINUS *F fth Ennead* TR IX CH II 250c 251a
18 AUGUSTINE *Ch istian Doctrine* BK II CH 30 651c d
19 AQUINAS *Summa Theologica* PART I Q 117 A I ANS and RE I 595d 597c PART I II Q 14 A 4 ANS 679b d
24 RABELAIS *Ga gantua and Pantagruel* BK II 76b-c BK III 186a c
25 MONTAIGNE *E says* 450d 451a
30 BACON *Ad an ement of Learn ng* 5b 6a 50c 51d 52d 53b 77d 78d
33 PASCAL *Pense* 33 176b
36 SWIFT *G llive* PART III 112b 113a
37 FIELDING *Ton J n* 86a c 90b
39 SMITH *Wealth of Nations* BK I 44c
51 TOLSTOY *Wa and P a* BK X 448d
54 FREUD *Hy ter a* 108a b

3 The pract ce of medicine

3a The appl cation of rules of art to partic ular cases in med c l pract ce

7 PLATO *Stat man* 599a b 600b d / *Law* BK V 684c 685a
8 ARISTOTLE *Metaphy cs* BK I CH I [981 5 24] 499b-c
9 ARISTOTLE *Pa t of An mal* BK I CH I [639b16-21] 161d 162a / *Eth cs* BK II CH 2 [1104 1-9] 349b-c BK III C I 3 [1112 30-b o] 358b-c BK VI CH I [1138b25 34] 387b CH 7 [1141b14 21] 390c d BK X CH 9 [1180b7 23] 435b c / *Pol t cs* BK III CH 15 [I 86 10-15] 484b BK VI CH 13 [1331b30-38] 536c / *Rh to* BK I CH 2 [1356b28 32] 596b-c
10 H PPOCRATES *Ancient Med cine* par 2 4b c pa 20-21 7b 8a / *Air Water Places* par 2 9b c / *Regimen n Act te Di ea es* par 18 34d 35b / *Ep dem cs* BK I SECT III par I 49c d BK III SECT III par 6 59b c / *A t culat ons* par I 94d 95a pa 71 117c / *Aphor m* SECT I par 9 131c
12 EPICTETUS *D cou s* BK II CH 17 159a b
30 BACON *Ad ancem nt of Learn ng* 52a 53c
36 S v T *Gull* PART I 112b 113a
36 STERNE *T i am Shandy* 372b 373a
37 FIELD NG *T m J ne* 70 71b
42 KANT *Pu Rea n* 60b c
51 TOLSTOY *W a a d Peac* BK IX 372a 373b
54 FREUD *Hysteria* 32 -c / *General Int od ct n* 607a b / *N w Introduct ry Lectu* 871d

(3 *The practice of medicine*)

3b General and specialized practice treating the whole man or the isolated part

6 HERODOTUS *History* BK II 65c
7 PLATO *Charmides* 2d 3b / *Phaedrus* 136b-c / *Gorgias* 282c d / *Timaeus* 474d-475d / *Laws* BK X 767d
10 HIPPOCRATES *Ancient Medicine* par 20 7b d / *Epidemics* BK I SECT III par 1 49c d / *Injuries of the Head* par 20 69d
25 MONTAIGNE *Essays* 373c d
44 BOSWELL *Johnson* 350c d
46 HEGEL *Philosophy of History* PART I 250c
51 TOLSTOY *War and Peace* BK IX 372a 373b
52 DOSTOEVSKY *Brothers Karamazov* BK XI 340c d
54 FREUD *Hysteria* 62b c / *General Introduction* 451b-452a 620b c / *New Introductory Lectures* 871d 872a
25 MONTAIGNE *Essays* 370c d 372b-373b 531d 532b
30 BACON *Advancement of Learning* 49b 50b 52a 52c d
36 SWIFT *Gulliver* PART III 112b 113a 114b PART IV 156b 157a
37 FIELDING *Tom Jones* 33 34a 70c 71b 145b 146a 157a 158a 373c d
51 TOLSTOY *War and Peace* BK I 38c d BK VIII 307a c BK IX 372a 373b BK XI 524c 525a
52 DOSTOEVSKY *Brothers Karamazov* BK XI 340c
54 FREUD *Origin and Development of Psycho-Analysis* 1b 2b / *Hysteria* 31b d 38d-40a 50b c 54b 56c 60b-62c esp 60b d 87a 90d esp 87a d / *Psycho-Analytical Therapy* 125b / *Wild Psycho-Analysis* 128a 129d esp 129c d / *Interpretation of Dreams* 151a c / *General Introduction* 550d 557a esp 556a b 593b c 605b 607b passim esp 606c 607b / *New Introductory Lectures* 872d 873a

3c Diagnosis and prognosis the interpretation of symptoms case histories

OLD TESTAMENT *Leviticus* 13 14
6 HERODOTUS *History* BK I 44d-45a
6 THUCYDIDES *Peloponnesian War* BK II 399c 400c
7 PLATO *Protagoras* 59b c / *Laws* BK IV 684c 685a
8 ARISTOTLE *Prior Analytics* BK II CH 27 [70 3 39] 92a c passim / *Prophesying* CH I [463 3 ^{b}10] 707b 708a
9 ARISTOTLE *History of Animals* BK I CH 10 [53 ^{b}14 20] 64b BK VII CH 12 [588 10-12] 114c BK VIII CH 18 [601^{b}6-8] 127c CH 21 [603^b 20 24] 129c CH 23 [604 4 12]-CH 24 [604^b 0] 130a c / *Rhetoric* BK I CH 2 [1357^{b}14 21] 597b c
10 HIPPOCRATES *Airs Waters Places* par 10 11 13b-14b / *Prognostics* 19a 26a c esp par 1 19a b par 15 22d 23a par 25 26a c / *Regimen in Acute Diseases* APPEND X par 9-14 38b 40d / *Epidemics* BK I SECT II par 5 46c d SECT III par 1-CASE XIV 49c 53d BK III SECT II 53d 56d SECT III par 16-CASE XVI 59b 63d / *Injuries of the Head* par 5 65a par 8 65c par 10-12 65d 67a par 19 69b c / *Fractures* par 5 76d 77a / *Articulations* par 10 94d 95a par 26 99a b par 30 99c 100b par 51 109a b par 54 111a par 57 111d 112b par 58 112d par 59 113b / *Instruments of Reduction* par 4 24 122d 126c passim / *Aphorisms* SECT I par 2 131a par 12 131d SECT II 132b 134a passim SECT IV par 17 SECT V par 15 135d 138b SECT V par 30-SECT VII par 86 138d 144 c passim
12 LUCRETIUS *Nature of Things* BK VI [1138-1214] 95b 96b
19 AQUINAS *Summa Theologica* PART I Q 13 A 5 ANS 66b 67d A 6 ANS 67d 68c Q 57 A 3 AN 297b 298a A 4 ANS 298a 299a
24 RABELAIS *Gargantua and Pantagruel* BK III 397a

3d The factors in prevention and therapy

3d(1) Control of regimen climate diet exercise occupation daily routine

OLD TESTAMENT *Proverbs* 16:24 17 22
APOCRYPHA *Ecclesiasticus* 30 5 31 19-22 37 29 31-(D) OT *Ecclesiasticus* 30 27 31 2 27 37 32 34
6 HERODOTUS *History* BK II 64c d
7 PLATO *Protagoras* 50d / *Symposium* 155c d / *Gorgias* 261a d 289c d / *Republic* BK III 334b 337a BK IV 345b-c / *Timaeus* 474d 475d / *Laws* BK II 656b-c / *Seventh Letter* 803c 804b
8 ARISTOTLE *Heavens* BK II CH 12 [292 14 ^{b}18] 383d 384b
9 ARISTOTLE *History of Animals* BK VII CH 12 114c BK VIII CH 21 [6 3^b 5 34] 129d / *Ethics* BK II CH 2 [1104 10 26] 349c d BK VI CH 7 [1141^{b}14 21] 390c d / *Politics* BK VII CH 11 [1330 34 41] 535a CH 16 [1335^{b}12 19] 540c CH 17 [1336 4 39] 541a-c BK VIII CH 4 [1338^b 39-1339^a 10] 544b-c / *Rhetoric* BK I CH 6 [1362^{a}29-33] 603a CH 7 [1364 3 5] 605b
10 HIPPOCRATES *Ancient Medicine* par 3 11 1d 4b par 13 16 4c 6b par 20 7b d / *Airs Waters Places* par 1 9a b par 3-7 9c 12a par 9-10 12d 14 par 12 14b d par 15 15b-c par 19-21 16c 17b / *Regimen in Acute Diseases* 26a 44a,c esp par 9 29d 30c APPENDIX par 18 41a d / *Epidemics* BK I SECT I par 1 44a b SECT II par 1 45a c par 7-8 47a c BK III SECT III par 1 2 56d 57a par 15 59b / *Surgery* par 20 73d / *Fractures* par 7 77c 78a par 9 78c d par 36 88d 89a / *Articulations* par 9 94b c par 50 108b d par 55 111a c par 58 112b 113a par 81 120d / *Aphorisms* SECT I par 3 11 131a-c par 13 19 131d 132 SECT II par 4 132b par 16-1 .22 132d par 36 133b par 38 45 133c par 49-50

133d SECT III par 1 19 134a d SECT V par 16- 9 138b d SECT VII p r 56 143a par 66 143c / Ulcers par 1 145a / Sacred Disease 160b d
10 GALEN Natural Faculties BK II CH 8 191b-195c
14 PLUTARCH Lycurgus 34b d 40c 42a / Caesar 583d 584b
22 CHAUCER Nun's Priest's Tale [14 82 -852] 450a b
24 RABELAIS Gargantua and Pantagruel BK I 26d 29d 48d-49a BK II 68a 69a c BK III 134d 135a 152a 153b 188d 191c
25 MONTAIGNE Essays 66c 67a 374a 375a 524b 527a 528a
28 HARVEY On Animal Generation 433c
29 CERVANTES Don Quixote PART II 345a 346b
30 BACON Advancement of Learning 26c d 47a b 53d 54a / New Atlantis 201b 211b-212
32 MILTON Paradise Lost BK XI [524-534] 310b 311a
36 SWIFT Gulliver PART IV 163a
36 STERNE Tristram Shandy 525a 526b
37 FIELDING Tom Jones 70c 71b 145b 146a
38 ROUSSEAU Inequality 335a b 336d 337a
39 SMITH Wealth of Nations BK IV 293d 294b
44 BOSWELL Johnson 171c d
48 MELVILLE Moby Dick 353b 354a
49 DARWIN Descent of Man 356d 357b
50 MARX Capital 324a 325c
51 TOLSTOY War and Peace BK I 52d BK V 215c d BK IX 372a 373b
54 FREUD Hysteria 64d 65a

3d(2) Medication drugs specifics

APOCRYPHA Wisdom of Solomon 16 12—(D) OT Book of Wisdom 16 12 / Ecclesiasticus 38 4 8—(D) OT Ecclesiasticus 38 4-8
4 HOMER Iliad BK IV [188 219] 25d 26b BK V [899-906] 39c BK XI [842-848] 81c
6 HERODOTUS History BK IV 143a 157a
6 THUCYDIDES Peloponnesian War BK II 400b-c
7 PLATO Timaeus 474d-475d / Statesman 601d 602a
9 ARISTOTLE History of Animals BK III CH 21 [522b9 13] 47d BK V CH 5 [530b6-10] 57b BK VIII CH 21 [603b9-16] 129 CH 24 [604b 26-29] 130c CH 26 131a CH 29 [607 2 34] 132c d BK IX CH 6 [612b15 18] 138b / Ethics BK VI CH 1 [1138b25 34] 387b
10 HIPPOCRATES Ancient Medicine par 13 4c 5a par 24 8d 9a c / Regimen in Acute Diseases par 1 26a d par 4 7 27c 29c par 14 17 32c 31c APPENDIX par 11 39c 40b par 16 40d par 26-39 43a-44a c / Fractures par 27 85b-c par 9 85d 86a / Articulations par 36 101d par 63 114d 115b / Aphorisms SECT I par 2 132d / Ulcers par 145a-c par 4 13 146b 149b / Fistulae par 2 12 150b 152d / Hemorrhoids par 2 3 152b d 153b par 6-7 153d 154a c
10 GALEN Natural Faculties BK I CH 13 176a 177a CH 14 179a b BK II CH 9 195d 196a BK III CH 13 209c
22 CHAUCER Prologue [411 444] 166b 167a / Tale of Melibeus par 10 403a
24 RABELAIS Gargantua and Pantagruel BK I 26d BK II 9 b c 96a d 124d 125d BK III 140b 173d 174a 189a c 196d 225a 226d BK IV 246d 247a 310d 311c
25 MONTAIGNE Essays 90d 91b 365b 379c passim esp 369c 370a
27 SHAKESPEARE All's Well That Ends Well ACT I SC I [227 262] 147d 148b ACT II SC I [71 189] 149b 150c SC III [46-5] 151d 152a / King Lear ACT IV SC IV [1 19] 272b c
28 GILBERT Loadstone BK I 19c 21c BK II 35b c
28 HARVEY Motion of the Heart 297d
30 BACON Advancement of Learning 26c d 47a b 51d 53d esp 53a-c / New Atlantis 201b 212c
36 SWIFT Gulliver PART III 108b 109a 112b-113a PART IV 156b 157a 161b 162a 169a
36 STERNE Tristram Shandy 372b 373a
37 FIELDING Tom Jones 63a c 76b 83b
38 ROUSSEAU Inequality 336d 337a
44 BOSWELL Johnson 257c d
49 DARWIN Descent of Man 323c
51 TOLSTOY War and Peace BK I 38b d BK V 215c d BK VIII 337d 338a BK IX 372a 373b 374a d BK X 449b c BK XII 533d 534a 535b c BK XIV 595a b BK XV 630b
54 FREUD Hysteria 40a b

3d(3) Surgery

4 HOMER Iliad BK XI [842-848] 81c
7 PLATO Republic BK II 336a b / Statesman 599a b 601d 602a
9 ARISTOTLE History of Animals BK III CH 4 [514 34 b5] 38 BK VIII CH 21 [603b5 16] 129b-c BK IX C 5 [631b19-632 32] 157a c
10 HIPPOCRATES Prognostics par 23 25a b / Regimen in Acute Diseases par 7 28d 29c APPENDIX par 2-6 35d 37a par 11 39c 40b par 24 42d par 29 43a b / Injuries of the Head par 9 65c d par 13 21 67b 70a c / Surgery 70b d 74d esp par 2 70b par 4 71a b par 6 71b par 10 72a b / Fractures 74b d 91d esp par 1 74b d 75a par 47 48 90d 91d / Articulations 91b d 121d esp par 61 113d 114a par 79 120b / Instruments of Reduction 121b d 130d esp par 4 129d 130c / Aphorisms SECT V par 68 140a SECT VI par 2 140d par 31 141a par 47 141c SECT V par 46 48 142d par 53 143a par 87 111c / Ulcers par 14 17 149b 150a c / Fistulae par 5 151a b / Hemorrhoids par 2-6 152b d 154a
18 AUGUSTINE Christian Doctrine BK I C 14 627d 628a
24 RABELAIS Gargantua and Pantagruel BK II 119b BK III 196c
25 MONTAIGNE Essays 330b d 373a b

(3d *The factors in prevent n and therapy 3d(3) Surgery*)

28 HARVEY *Motion of the Heart* 289d 290a / *On Animal Generation* 376d 377a 438b c
30 BACON *Adva cement of Lea ning* 52b c / *New Atlantis* 211d
36 S IFT *Gulliver* PART III 113b PART IV 148b
37 FIELDING *Tom Jones* 70c 71b 162a c
38 ROUSSEAU *Ineq ual ty* 336d 337a
51 TOLSTOY *War and P ace* BK X 464a-465c
53 JA ES *Psychology* 844a
54 FREUD *Hysteria* 81b c

4 The concept of health normal balance or harmony

7 PLATO *Charmides* 2d 3b / *Symposium* 155d 157a / *Meno* 175b / *Gorgias* 282c 283a / *Republic* BK III 334b 337a BK IV 355b d BK IX 422c d 427a / *Timaeus* 472a c 474d 475d / *Philebus* 616d 617a / *Laws* BK V 690a c
8 ARISTOTLE *Catego es* CH 8 [8^b25–9^a28] 13d 14b / *Topics* BK III CH 1 [116^b17–22] 163a b / *Physics* BK II CH 3 [246 o–^{b}19] 329c 330a / *Metaphysics* BK V CH 20 [1 22^b10–13] 544a / *Soul* BK I CH 4 [407^b31 408 2] 637c BK II CH 2 [414 4 14] 644a b / *Sen and the Sensibl* CH 5 [445 16–3] 683a b
9 ARISTOTLE *H sto y of Animals* BK III C 1 19 [520^b 9–521 14] 45c 46a BK VII C 1 1 [581^b 25 582 4] 107b c / *Parts of An m ls* BK I CH 1 [640 4 7] 162d K II CH 5 [65 37 ^{b}18] 176c H 7 177 179a BK IV CH 2 [$6/7^a5$ ^{b}1] 206d 207b / *Ethics* K II CH 2 [1104 10–26] 349c d BK \ CH 1 [1 9 12 5] 376b c CH 11 [1138 28 32] 386d K VI 1 12 [1143^b2 1144 5] 393b c passim / *Rhetor c* BK I CH 5 [1361^b3 26] 60?a b C 1 7 [1363^b34 1364 5] 605b
10 HIP OCRATES *Ancient M d cine* p r 13 19 4c 7b / *Reg men in Acute Diseas* par 9 29d / *Sacr d D ease* 156b-c
10 G LEN *Nat ural F cult s* BK II CH 8 194c d CH 9 195c 196a
12 LUCRETIU *Nature of Th ngs* BK III [558–565] 37b
12 AURELIUS *Med tat ons* BK V SECT 8 269d 270b
18 AUGUSTINE *City of God* BK XIX CH 13 519a 520a BK XXII CH 24 610c 611a / *Ch istian Doctri e* BK I CH 16 628 d
20 AQUIN *Summa Th l g ca* PART I II Q 49 A 2 2b-4a A 3 REP 3 4b 5a A 4 NS 5a 6a Q 50 A 1 A s and REP 2 3 6a 7b A 3 REP 2 8b 9a Q 51 A 1 ANS 12b-13c Q 52 A 1 ANS and REP 3 15d 18a A ANS 18a 19 Q 54 A 1 A 22d 23d Q 73 A 2 N 120d 121c A 3 ANS 121c 122b Q 82 A 1 ANS and REP 1 168a d
24 RABELAIS *Gargantua and Pantagruel* BK III 137d 139b BK IV 234a 235a 239d 240a
25 MONTAIGNE *Essays* 233c 236a 368d 369d 370a
28 H RVEY *Mot on of the Heart* 296d 297a / *On An mal Generation* 493a b
30 BACON *Advancement of Learn g* 50c 51d 72b
32 MILTON *Parad se Lost* BK XI [524–543] 310b 311a / *Areopagit ca* 407b
36 S IFT *G ll ver* PART IV 155b 156a 170b-171b
36 STERNE *Tristram Shandy* 412a 417a
38 ROUSSEAU *Inequal ty* 336b d / *Political Economy* 368d 369a
39 S ITH *Wealth of Nations* BK IV 293d 294b
42 KANT *P ef Met physical Elements of Ethics* 368d 369a / *J dgement* 509c d
51 TOLSTOY *W a and Peace* BK X 449b-c
53 JA ES *Psycholog* 799a b
54 FREUD *Gener l Introduction* 635b-c

5 The theory of disease

5a The nature of disease

6 THUCYDI ES *P l ponnesian War* BK II 400b c
7 PLATO *Lysis* 21d / *Rep iblic* BK IV 354d 355c BK VI 1 409a BK X 435a d / *Timaeus* 472a 474d
8 ARISTOTLE *Phys cs* BK VII CH 3 [246^a10–$^b19$] 329 330a
9 ARISTOTLE *Generat on of An m ls* BK V CH 4 [784 31 ^{b}34] 326b d / *Ethics* K II CH 2 [11 4 1 9] 349c BK V CH 1 [1129 1 25] 376b c
10 HI POCRATES *Ancient Medicine* par 14 5a-c par 16 5d 6b par 19 6d 7b / *Fractures* par 31 87a / *Sacred Disease* 159b
10 G LEN *N tural F cult es* BK II C 1 8 193d 194c d CH 9 195c 196a BK III CH 12 208b-209b esp 208d
17 PLO NUS *Seco d Ennead* TR IX CH 14 74b d
20 AQUINAS *Summa Theologica* PART I II Q 71 A 1 REP 3 105d 106c Q ,2 A 5 ANS 115a 116b Q 73 A 2 ANS 120d 121c A 3 S 121c 122b Q 77 A 3 ANS 147c 148b Q 82 A 1 ANS and REP 1 168 d A 4 REP 2 170b-171a Q 98 A 1 ANS 193a 194b PART III SUPPL, Q 81 A 4 RE 4 966d 967d
25 MONT I NE *Essay* 528c 529b
28 H RV Y *Ci culat on of the Blood* 305 d
32 MILTON *Pa ad e Lost* BK XI [477 543] 09b 311a
36 S I T *Gull ver* P RT IV 155b-157a
39 S ITH *Wealth of Nat ons* BK IV 293d 294b
51 TO S OY *W a d Pe ce* BK IX 372a b
53 J *Psychology* 799a 807b esp 799a 800a 806 b 815a
54 FREUD *Na cissism* 403a b

(5 *The theory of disease* 5d *The causes of disease internal and external factors*)

30 Bacon *Advancement of Learning* 49d 50b 52b d
31 Descartes *Discourse* part vi 61c
32 Milton *Paradise Lost* bk xi [47 548] 309b-311a
36 Swift *Gulliver* part iii 112b 113a part iv 155b 157a 161b 162a 163a
36 Sterne *Tristram Shandy* 413b 414b
38 Rousseau *Inequality* 336a 337a esp 336b c 364b
39 Smith *Wealth of Nations* bk i 34d 3 b
41 Gibbon *Decline and Fall* 70d 71a
44 Boswell *Johnson* 306d 307a
48 Melville *Moby Dick* 350b 351b
49 Darwin *Origin of Species* 9d 10a / *Descent of Man* 256a 325c 327a passim 351a 355a 356d 357b
50 Marx *Capital* 115c 118b 124a 142b d [fn 4] 178b [fn 1] 194b 195b 204a c 229c 236 237d 324a 330d passim
51 Tolstoy *War and Peace* bk i 52d
53 James *Psychology* 69a b 535a 895a
54 Freud *General Introduction* 604c 605c

5d(1) The humoural hypothesis temperamental dispositions

7 Plato *Timaeus* 472a-474d
9 Aristotle *Parts of Animals* bk iv ch 2 [677a5-b1] 206d 207b
10 Hippocrates *Ancient Medicine* par 13 20 4c 7d par 22 8a d par 24 8d 9 c / *Airs Waters Places* par 10 13b-14a / *Regimen in Acute Diseases* appendix par 1 35c d par 3 35d 36a par 5-6 36b 37a / *Epidemics* bk iii sect iii par 14 59b / *Aphorisms* sect i par 2 134a par 11 134b par 14 134c / *Sacred Disease* 155d 160d esp 159a b
10 Galen *Natural Faculties* bk ii ch 8-9 191b 199a c
12 Lucretius *Nature of Things* bk iii [487-5] 36b-c
14 Plutarch *Alexander* 542a-c
19 Aquinas *Summa Theologica* part i q 119 a 1 rep 3 604c 607b part i ii q 46 a 5 ans and rep 1 815d 816d
20 Aquinas *Summa Theologica* part i ii q 73 a 2 ans 120d 121c a 3 ans 121c 122b q 77 a 3 ans 147c 148b q 82 a 1 rep 1 168a d a 4 rep 2 170b-171a part iii suppl q 8 a 3 958b 959c q 82 a 1 ans and rep 4 968a 9 0c
22 Chaucer *Prologue* [411 444] 166b 167a
24 Rabelais *Gargantua and Pantagruel* bk iii 138a d
25 Montaigne *Essays* 371c d
28 Harvey *On Animal Generation* 435b c
30 Bacon *Advancement of Learning* 26c d 52b-c 77a-c
32 Milton *Samson Agonistes* [L 9-6] 352b
36 Swift *Gulliver* part iii 112b 113a part iv 163a
36 Sterne *Tristram Shandy* 380 412a-414b esp 412a-414b
37 Fielding *Tom Jones* 283a b

5d(2) The psychogenesis of bodily disorders

Apocrypha *Ecclesiasticus* 30 21 24—(D) OT *Ecclesiasticus* 30 2 26
7 Plato *Charmides* 2d 3b / *Timaeus* 4 4d 475c
10 Hippocrates *Epidemics* bk iii sect iii case xi 62b c case xv 63b-c / *Sacred Disease* 158a
12 Lucretius *Nature of Things* bk iii [160] 32a
19 Aquinas *Summa Theologica* part i q ii a 3 rep 3 598c 599b part i ii q 28 a ans 743c 744b
25 Montaigne *Essays* 36c 42a 234c 235a 332d 33c 532a b
28 Harvey *Motion of the Heart* 296d / *Circulation of the Blood* 321d 322a
30 Bacon *Advancement of Learning* 49d 5 b
36 Swift *Gulliver* part i 163a
37 Fielding *Tom Jones* 253d
44 Boswell *Johnson* 350c d
51 Tolstoy *War and Peace* bk iii 142d bk v 220b c bk vi 247d 248a bk vii 301b-302d passim bk ix 373a b bk xiii 567d 568c esp 568b bk xv 617a b
52 Dostoevsky *Brothers Karamazov* bk xi 331d 332a
53 James *Psychology* 132a 135b esp 132a b 847b 848a
54 Freud *Origin and Development of Psycho-Analysis* 1b 6b esp 4c 5a / *Hysteria* 25a 59d esp 25a 27a 30 d 35b-c 37d 38d 56b 58c 82d 83c 88c 89 90b d / *Narcissism* 403a c / *Repression* 426b c / *General Introduction* 572a b / *Inhibitions Symptoms and Anxiety* 718a 719d 728 729a / *New Introductory Lectures* 852a b

5e The moral and political analogues of disease

Old Testament *Psalms* 147 3—(D) *Psalms* 146 3 / *Isaiah* 1 4-6—(D) *Isaias* 1 4-6 / *Jeremiah* 8 21 22 30 12 17 33 6 46 11—(D) *Jeremias* 8 21 22 30 12 17 33 6 46 11
5 Sophocles *Oedipus the King* 99a 113a c esp [129 1415] 111b 112b
7 Plato *Gorgias* 268b c / *Republic* bk iv 345a d 354d 355 bk viii 409a 412d bk x 435a d / *Timaeus* 474b d / *Sophist* 556d 558d / *Laws* bk iv 684c 685a bk v 690d 691b
8 Aristotle *Metaphysics* bk iv ch 4 [1008b 25 32] 528b
9 Aristotle *Ethics* bk ii ch 2 [1 1 10-26] 349c d bk v ch 11 [1138 29-b4] 386d 38 a bk vii ch 8 [115 b29-1151 4] 401c d

12 AURELIUS *Medit ons* BK X SECT 8 269d 270b
14 PLUTARCH *Agesilaus* 49 c d / *Phocion* 605a b / *Aratus* 834d
15 TACITUS *Annals* BK III 57d 58b
18 AUGUSTINE *Christ Doctr e* BK I CH 14 627d 628b CH 16 628c d
20 AQUIN *Summa Theol g ca* PART I II Q 71 A 1 REP 3 105d 106c Q 72, A 5 ANS 115a 116b Q 73 A 2 ANS 120d 121c A 3 ANS 121c 122b Q 77 A 3 147c 148b Q 82 A 1 ANS and REP 1 168a d A 4 REP 2 170b 171a Q 88 A 1 NS 193a 194b
22 CHAUCER *Tale of Melibeus* par 10 403a
23 HOBBES *Leviathan* ART I 68d 69a PART II 148c 153a
25 MONT GN *Essays* 330b-d 462c 465c passim 504c 505d
27 SHAK S EA E *Hamlet* ACT III SC IV [144-152] 56a b / *Othello* ACT III SC III [3 1 333] 225c d
36 SWIFT *Gulliver* PART III 112b 113a
36 STERNE *Tristr m Shandy* 215b 216a 380a
38 ROUSS AU *Pol tical Economy* 368d 369b / *Social Contract* BK III 419c d
39 SMITH *Wealth of Nat ns* BK IV 293d 294b
43 FEDE LIST NUMB R 38 122b 123c

6 M nt l d sease or d sorder its causes and cure

6a The d tinction between san ty and in sanity the concept of mental health and the nature of m dness

7 PLATO *Timaeus* 474b d
8 ARISTOTLE *Phy ics* BK VII CH 3 [247^b1-248 9] 330b-d / *Dr ms* CH [460 3 $^b18$] 704b-c
9 AR S OTLE *Ethics* BK VII CH 5 399a d pass m
10 HIPPOCRATES *Sacred Disea e* 159a b
12 E ICTETU *Discours s* BK II CH 15 155c 156b
19 AQUIN S *Summa Theologica* PART I Q 84 A 7 AN 449b-450b Q 115 A 5 R P I 590d 591c P RT I II Q 6 A 7 REP 3 650a d Q 10 A 3 ANS and REP 2 664d 665c Q 24 A 2 ANS 727d 728c Q 28 A 3 ANS a d R P I 742 d Q 37 A 4 REP 3 785d 786d Q 48 AA 3 4 824c-826a c
20 AQU N S *Summa Th ologica* ART I II Q 74 A 5 RE I 131d 132b
23 HO BE *Le tha* P RT I 66d 67b 68b 69c
24 RABELAIS *Ga gantua and I ntagruel* BK I I 2 1b-d
25 MONT IGNE *Essays* 166a 167 235b-c
30 BACO *Ad a cement of Learn g* 72b
31 DESC RT S *Obj ct ns and Repl es* 155d 156a
31 S NOZA *Ethics* PAR IV PRO 44 SCHOL 437d 438a
35 LOCKE *H ma U derstand g* BK II C I XI SECT 13 146b-c CH XXXIII SECT 3 4 248c d
35 HUME *Human Understandi g* SECT II DIV II 455b-c
37 FIELDING *Tom Jones* 68c d
43 MILL *Liberty* 299d 300b [fn 1]
44 BOSWELL *Joh son* 13c 14a 111d 354c 355a
48 MELVILLE *Moby Dick* 38.b-389b
51 TOLSTOY *War and Peace* BK XI 525c
52 DOSTOEVSKY *Brothers I a ama ov* BK XII 356d 359b
53 J MES *Psychol gy* 13 a 241b 258b esp 242a 244 749a 750b 799a 807a esp 799a 800a 806a b
54 FREUD *Origin and Developme t of Psycho Analysis* 18c 19a / *Hysteria* 86a d 102a 106c / *Interpretat on of Dreams* 174d 176d 289a b 364c d / *Na cissism* 99b d / *Un con cious* 433c 440a 442b / *General Intro ducti* 593c 624c 625d 633d 635c esp 635b-c / *War and Death* 760b / *New Intro ductory Lectures* 812a 830d 832a

6b The classification of mental d seases

7 PLATO *Timaeus* 474b d
9 ARISTOTLE *Eth cs* BK VII CH 5 399a d passim
10 HIPPOCRATES *Sacred D s ase* 159b c
23 HOB ES *Lev athan* PART I 67b 68c d
53 JAMES *Psychology* 241b
54 FREUD *Hyster a* 60b 61c 87a d / *Narcissism* 403b d / *General Introdu ction* 451d 568c 605b 606d esp 606c d 620c d

6c The process and causes of mental disorder

NEW TESTAMENT *Ma k* 9 17 29—(D) *Mark* 9 16-28
5 AESCHYLUS *Choephoroe* [021 1076] 80a d
5 SOP OCLES *Aj x* [1 332] 143a 146a
5 EU I IDES *Baccha tes* 340a 352a c esp [847 1326] 347b 351b / *Heracles Mad* [815 1145] 371d 374d esp [822-873] 372a c / *Orestes* [1 426] 394a 398b
6 HERODOTUS *History* BK II 86b BK III 95d 98a K VI 199c 201c esp 201b c
7 PLATO *Tima us* 474b d
8 ARISTOTLE *Categor es* CH 8 [9^b34 10 6] 15a / *Dreams* CH 2 [460 32 $^b18$] 704b c
9 ARISTOTLE *Ethi s* BK VII CH 5 399a d passim
10 HIPPOCR TES *Sacred Disease* 154a 160d esp 155d 156a 159 b
12 LUCRETIUS *Nature of Th ngs* BK III [487 505] 36b c
19 AQUIN *Summa Th ologica* PART I Q 115 A 5 REI 1 590d 591c PART I II Q 6 A 7 REP 3 650a d Q 10 A 3 NS and REI 2 664d 665 Q 24 A 2 NS 727d 728c Q 28 A 3 NS and REP 1 742a d Q 37 A 4 REP 3 785d 786d Q 48 AA 3 4 824c 826a c
23 HOBBES *Lev athan* PART I 67b 68b 71b
25 MONTAI NE *Es ys* 235b-c
26 SHAKESPEARE *M dsummer Night s Dream* ACT V SC I [1 7] 370d 371a
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CROSS REFERENCES

For Discussions bearing on learned professions or professional education *see* EDUCATION 5a 6 LAW 9 RHETORIC 6

The general theory of art which underlies the consideration of medicine as an art *see* ART 3 9a EXPERIENCE 3a KNOWLEDGE 8a

The theory of signs involved in the interpretation of symptoms *see* LANGUAGE 10 SIGN AND SYMBOL 4e and for other matters relevant to medical diagnosis and prognosis *see* HYPOTHESIS 4b 4d

Another discussion of health and disease *see* LIFE AND DEATH 5a 5c and for the special problems of mental disease and the methods of psychopathology *see* EMOTION 3a 3c-3d MAN 5b MEMORY AND IMAGINATION 2e(3)-2e(4) 5c MIND 2c(2) 8a-8c WILL 9b

Discussions relevant to the comparison of mental health or sanity with happiness *see* HAPPINESS 2a JUSTICE 1b

ADDITIONAL READINGS

Listed below are works not included in *Great Books of tl e Western World* but relevant to the idea and topics with whicl this chapter deals These works are divided into two groups

I Works by authors represented in this collection
II Works bv autho s not represented in this collection

For the date place and other facts conce n ng the publication of the works cited consult the Biblio,raphy of Additional Read ngs which follows the last chapter of *The Great Ideas*

I

Plutarch Rul s for the Preservation of Health in *Moralia*
Galen *On Medical Experience*
—— *Opera Omnia*
F Ba on Reg men of Health in *Essays*
Dostoevsky *The Idiot*
Freud *The Dynamics of the Transference*
—— *The Employment of Dream Interpretation in Psycho Analysis*
—— *R comm ndations fo Physicians on the Psycho Analyt c Method of Treatment*
—— *A Out ine of Psychoanalysis*

II

Celsus *De M dici a* (*On Med ci e*)
Avicenna *The Cano of Medicine* bk i
Maimo ides *Regim n Sanitatis*
B rt lo om eus Anglicu *On Med cine*
R Bacon *On the Er ors of Physicians*
Bocc ccio *Decamero* proem
Par celsus *The Dis ases That Depr ve Man of His Reason*
—— *On the Miners S ckness and Other Miners Diseases*
—— *Seven Defens ones*
Ves liu *The Ep tome*
Burton *The A atomy of Melancholy*
Molière *Le médecin malgré lui* (*The Mock Doctor*)
—— *Le malade imag aire* (*The Hyp chondriac*)
Ramazzi i *De Mo bis A tificum* (*The Diseases of Workers*)
Voltaire Physicians in *A Philosophical Dictionary*
Jenner *An Inquiry into the Cau ses and Effects of the Variolae Vaccinae*
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O W Holmes *Currents and Counter Currents in Med cal Science*
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P M Janet *The Major Symptoms of Hysteria*
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M nn *The Magic M u tain*
S Lewis *Arrowsm th*
C rooks iank *Ind idual Diagnosis*
Shaw *Doctors Delu ions*
E Allen *Sex and Inter al Secretions*
Cannon *The Wisdom of the Body*
Gibson *The Physic a i Art*
B Rus ell *Rel gion and Science* ch 4
Zilboorg *The Med cal Man and the Witch During the Rena ssance*
Best a d Taylor *The Physiological Basis of Med ical Pract e*
Buc ianan *The Doctrine of S gnatures* ch 3–6
Fe ring *The Hospital*

Chapter 56 MEMORY AND IMAGINATION

INTRODUCTION

CONCERNING memory and imagination the tradition of western thought seems to be involved in less dispute than it is on other aspects of human and animal life There are, as we shall see, points of difficulty and debatable theories But these arise only within the framework of certain fundamental insights which are widely if not universally shared Here at least we can begin without having to deal with verbal ambiguities Unlike many of the words which are the traditional bearers of the great ideas memory and imagination have a constant core of meaning in almost everyone s discourse

It is understood that memory and imagination depend upon sense perception or upon previous experience Except for illusions of memory we do not remember objects we have never perceived or events in our own life such as emotions or desires that we have not experienced The imagination is not limited in the same way by prior experience for we can imagine things we have never perceived and may never be able to

Yet even when imagination outruns perception it draws upon experience for the materials it uses in its constructions It is possible to imagine a golden mountain or a purple cow though no such object has ever presented itself to perception But as Hume suggests the possibility of combining a familiar color and a familiar shape depends upon the availability of the separate images to be combined

When we think of a golden mountain Hume writes we only join two consistent ideas *gold* and *mountain* with which we were formerly acquainted All this creative power of the mind amounts to no more than the faculty of compounding transposing augmenting or diminishing the materials afforded us by the senses and experience A congenitally color blind man who lived entirely in a world of grays would not be able to imagine a golden mountain or a purple cow though he might be able to imagine things as unreal as these

Because of their dependence on sense-perception memory and imagination are usually regarded as belonging to the same general faculty as the external senses Not all writers however conceive of a generic power of sense which they then divide into the exterior senses such as sight hearing and touch and the interior senses such as memory and imagination Some like Hobbes treat imagination as nothing but decaying sense and use the word memory to express the decay and signify that the sense is fading old and past

The image whether it is a memory image or fancy free *re produces* or *re-presents* sensory material It may be less vivid less sharp in outline and less definite in detail than the sensation or perception from which it is derived But in one important respect the image does not differ from the original sense impression That is the respect in which ideas or concepts do differ from sense impressions—at least according to those who hold that ideas or concepts have a certain universality and abstractness which is not found in sensations and sensory images Those who like Berkeley and Hume call sensations or images ideas deny the existence of abstract ideas or universal notions precisely because they too agree that sense-impressions or sensory images are always particular in their content and meaning

THE FUNDAMENTAL controversy about what an idea is and the verbal confusion occasioned by the ambiguity of the word (which appears in the chapter on IDEA) do not seem to affect the understanding of the nature of images or their role in the activities of memory and imagina

tion As William James points out in discussing the blended or generic image which is somehow associated with abstract or universal meaning a blurred thing is just as particular as a sharp thing and the generic character of either sharp image or blurred image depends on its being felt *with its representative function* He speaks of this function as the mysterious *plus* the understood meaning but he denies the possibility of universal or abstract *images* whatever may be the truth about ideas which are not images at all Certainly those who deny the presence of anything abstract or universal in the understanding do so on the ground that the content of the mind is basically sensory whether the mind is perceiving or remembering imagining or thinking

The controversy about the nature of the mind does not seem to affect the conception of memory or imagination As neither is confused with sense perception so neither is confused with rational thought This remains the case whether the theory of mind looks upon the intellect as a faculty separate from the sensitive faculty (including memory and imagination) or conceives the understanding as a single faculty which is active in judgment and reasoning as well as in perceiving remembering and imagining

This and related issues are considered in the chapter on MIND Except for one point perhaps such issues can be ignored here Sensation is attributed to both animals and men—to all organisms which give evidence of having sense organs or some sort of sensitive apparatus Whether all animals even those which have the most rudimentary sensorium also have memory and imagination may be disputed but no one doubts that the higher animals with central nervous systems and brain structures resembling those of men can remember and imagine as well as perceive

All agree furthermore that memory and imagination require bodily organs though the assignment of these two functions to the brain as their organic seat is more uniformly a tenet of modern than of ancient physiology and can be more clearly expounded as the result of modern researches in neurology But the question whether the memory or imagination of men and other animals differs more than their bodies do elicits opposite answers from those who affirm that man alone has reason and those who deny that man has powers of knowing or thinking not possessed by other animals to some degree

Nevertheless if man alone is considered the nature of memory and imagination is clear The object remembered or imagined need not be physically present to the senses like the object perceived The object imagined need not be located in the past like the object remembered nor for that matter need it have any definite location in time and space It need have no actual existence It may be a mere possibility unlike the object which cannot be known without being known to exist As the object of memory is an event which no longer exists so *the object of imagination may be* something which has never existed and never will

Thus memory and imagination greatly enlarge the world of human experience Without them man would live in a confined and narrow present lacking past and future restricted to what happens to be actual out of the almost infinite possibilities of being Without memory and imagination man could be neither a poet nor an historian and unless he had an angelic sort of intellect which in no way depended on sense experience he would be impeded *in all* the work of science if memory and imagination did not extend the reach of his senses

THE PSYCHOLOGICAL analysis of memory usually divides it into a number of separate acts or phases Recollection presupposes the retention of the material to be recalled The ingenious experiments of Ebbinghaus that James reports —using the memorization of nonsense syllables to isolate the factors influencing memory— seem to show that retention is affected by the strength of the original associations *But re*tention is also affected by the interval between the time of learning and the time of revival The amount of forgetting seems to be a function of two separate factors the force with which the material to be recalled is originally committed to memory and the lapse of time

That retention is not the same as recall may be seen from Ebbinghaus experimental discovery of the fact that forgetting is never com

plete Material which lies below the threshold of recall is nevertheless retained and manifests its presence by its effect on attempts to relearn the material which *appears* to have been for gotten

Nothing can be utterly forgotten if as Augustine suggests what seems to be forgotten remains in the memory He considers the effort *men make to remember a forgotten name* Where does that name come back from he asks except from the memory? For even when it is through being reminded of some thing else that we recognize someone s name it is still by memory that we do it for we do not hold it as some new thing learned but by mem ory we are sure that this is what the name was But were the name utterly blotted out of mind Augustine argues we should not re member it even if we were reminded For if we had utterly forgotten it we should not even be able to think of looking for it

Freud cons ders forgetting from another *point of view He describes the psychoanalytic* method at its inception as a talking cure in volving efforts in reminiscence The things which we have put out of mind he claims are hindered from becoming conscious and forced to remain in the unconscious by some sort of force He calls this repression Freud ob served that it occurred when a wish had been aroused which was in sharp opposition to the other desires of the individual and was not capable of being reconciled with the ethical aesthetic and personal pretensions of the pa tient s personality The end of this inner struggle was the repression of the idea which presented itself *to consciousness as the bearer of* this irreconcilable wish This was repressed from consciousness and forgotten

On this view things which have been put out of mind because we find them unpleasant to contemplate things which are repressed in order to avoid conflict are not forgotten when they cannot be consciously remembered Nor a e they below the threshold of recall in the sense that our retention of them has been so weakened by time that no effort at recollection can revive them On the contrary they may be capable of quite vivid rev val when the emo tional obstacles to recollect on are removed Freud applies his theory of the obliviscence of the disagreeable to such everyday occurrences as the forgetting of familiar names as well as to the repression of memories connected with the emotional traumas of early life

Recollection is distinct not only from reten tion but also from recognition The illusion known as *deja vu* consists in the experience of intense familiarity with a place or scene that so *far as one can recall* has *never* been witnessed before In contrast normal recognition depends upon previous acquaintance with the object being cognized again *i e re-cognized* The fact noted by many observers that recognition may or may not be ccompanied by recollection of the previous circumstances indicates the sep aration of recall and recognition as acts of memory Whereas recollection is remembering through the recall of images recognition con sists in remembering at the very moment of perceiving Both however depend upon what seems to be memory s fundamental act —retention

WITH REGARD TO retention there are two prob lems which have been the subject of inquiry throughout the whole tradition The first con cerns what is usually called the association of ideas From Aristotle through Hobbes and Hume to James and Freud there have been various formulations of the laws of association and various interpretations of what such la s signify about the mind Ebbinghaus for ex ample used nonsense syllables in order to meas ure the effect upon retention of the associations formed by repetition of a series of sounds All meaning had been removed in order to avoid *the influence upon recollection of associations* resulting from meaningful connections of the sort wh ch exists among ordinary words The repetition of nonsense syllables in pairs or series illustrates association by contiguity or succes sion According to most writers the elements of experience become associated through other modes of relation also such as their s milarity or contrast with one another in any significant respect

It is not the association itself which is re membered Rather it is throu h the a sociation of one part of experience with another that memory seems to wo k one particular tending to recall others with which it has been asso

ciated in one or more ways Recollection seems to occur through activating connections which have been formed and retained The modern differentiation of controlled and free association indicates two ways in which this can happen—either by a purposeful pursuit of the past or by the apparently chance recall of one thing by another The ancients make a parallel distinction between reminiscence and reverie The former is a process in which recollection resembles reasoning in proceeding step by step through a series of related terms the latter is more like daydreaming or spontaneous fantasy

The second problem can be stated perhaps as the mystery of retention itself In describing the capacity of the memory to hold the innumerable things which are not now in mind but can be recalled the ancients speak of memory as the storehouse of images Every variety of thing which can be perceived can be stored up in the memory says Augustine and called up at my pleasure When I speak of this or that he goes on the images of all the things I mention are at hand from the same storehouse of memory and if the images were not there I could not so much as speak of the things The things themselve are not brought into the memory it is only their images which are seized with such marvellous speed and stored away marvellously as if in cabinets and as marvellously brought forth again when we remember

The marvel of memory deepens into a mystery when we ask what the metaphor of the storehouse literally means Where actually are the images when they are not actually in mind? If an image is by its nature an act of consciousness hereby we apprehend objects not immediately present to our senses how do images exist outside of consciousness during intervals when they do not function in remembering imagining o other acts of knowing? Their return to consciousness seems to imply that they have been retained but where and how is the problem not solved by the metaphor of things stored a ay in a capacious barn

The physical storehouse does not require any fundamental transformation in the being of the things it holds between periods when they are actually in use The memory does Th s problem of the nature and causes of retention Wil liam James seems to think can be solved only in terms of the retentive power of nervous tissue—what he calls physiological retentiveness —though in the view of others the problem becomes no easier (and may even be more complicated) when it is transferred from mind to matter On either view there seems to be no question that changes in the brain are somehow causally connected with the activity of memory and imagination especially retention and recall Aquinas for example observes that the imagination and memory may be hindered by a lesion of the corporeal organ or by lethargy an observation many times extended by more recent investigations of the brain pathology underlying amnesia and aphasia

JAMES TREATMENT of retention as somehow based on pathways traced in the brain with recall the result of a retracing of these paths tends to emphasize the affinity between memory and habit His theory discussed in the chapter on HABIT that the plasticity of matter certainly living matter underlies learnin or habit formation while the inertia or retentiveness of matter especially the neural matter of the brain explains memory or the persistence of habits during periods of disuse seems almost to identify habit and memory Ice skating after many years of absence from the sport is as much remembering how to ice skate as reciting a poem committed to memory in youth is the exercise of an old habit

Not all conceptions of habit and memory permit thi fusion of the two—or even their affinity as related aspects of the same phenomenon Aquinas for example restricts memory to an act of knowledge The performan e popularly called reciting from memory would not be for him an act of memory though it might involve memory if the recitation were a companied by knowledge of the time or place and occasion when the poem was first learned Such knowledge would be a memory but the recitation itself would not be any more than ice skating is These performances represent the exercise of habits of skill or art

In view of this Aquinas raises the question whether the act of knowledge of the sort involved in recon idering a geometric proof

learned at some earlier moment and now re-called to mind is an act of memory The knowledge of the proof which is retained by the intellect during periods when it is not actually exercised he would call an intellectual habit or habit of knowledge But should the recollection of this retained knowledge or the activation of this intellectual habit also be called an act of memory? Aquinas answers No on the ground that no reference to the past need be involved in reworking a geometrical problem solved at some earlier time But if the individual also happens to recall *when* he first solved the problem that is another matter Even so Aquinas claims that if in the notion of memory we include its object as something past then the memory is not in the intellectual but only in the sensitive part The intellect is said to remember only in the sense of recalling a truth retained by habit and not in the sense that it understands the past as something here and now

Memory is considered in still another way in relation to speculative truths about scientific or philosophical matters The question is one of the origin of such knowledge In the usual conception of memory as knowledge of past particulars one traditional view found in Aristotle holds that out of sense perception comes to be what we call memory and out of frequently repeated memories of the same thing develops experience —the generalized experience which gives rise to induction and the apprehension of the universal But in the tradition of the great books we also find a more radical and perhaps less familiar conception of memory as the chief source of knowledge

This is Plato s doctrine of reminiscence in which all learning is a kind of remembering of knowledge already present in the soul All teaching takes the form of helping the learner to recollect things he may not be aware he knows by reminding him through a process of questioning which awakens the knowledge already latent in him.

In the *Meno* Meno asks Socrates What do you mean by saying that we do not learn and that what we call learning is only a process of recollection? Socrates undertakes to show Meno what he means by taking a slave boy who appears not to know the solution of a certain geometrical problem and merely by questioning him without ever giving him a single answer getting the slave boy to find the right solution for himself Meno assures Socrates that the slave boy had never been taught geometry Since the boy was not told the answer he must have always known it and needed only some reminding to remember what he knew Socrates suggests the explanation that the boy s soul always possessed this knowledge bringing it from another life

Before he undertook the demonstration with the slave boy Socrates had proposed this hypothesis The soul being immortal and having been born again many times and having seen all things that exist has knowledge of them all and it is no wonder that it should be able to call to remembrance all that it ever knew about virtue and about everything for as all nature is akin and the soul has learned all things there is no difficulty in her eliciting or as men say learning out of a single recollection all the rest if a man is strenuous and does not faint for all enquiry and all learning is but recollection

Though he differs from Plato in his conception of the soul and the origin of the knowledge which it innately possesses Augustine seems to hold a similar view As he examines his own memory it appears to contain much that has not been implanted there by sense experience Certain things referred to by words he understands he says I never reached with any sense of my body nor ever discerned them otherwise than in my mind yet in my memory have I laid up not their images but themselves How they entered into me let them say if they can for I have gone over all the avenues of my flesh but cannot find by which they entered If the seeds of learning are in the soul at its creation memory can draw from these seminal reasons the full fruit of knowledge

THE DOCTRINE OF reminiscence changes the meaning of both learning and memory at the same time When learning consists in remembering knowledge not acquired in this life then the activity of memory cannot be as it is usually conceived a recollection of knowledge previously acquired in this life by learning In order to understand a doctrine in which famil

iar meanings are so profoundly altered it is perhaps necessary to understand the problem it tries to solve

That problem exists only for those who make an absolute distinction between particular sensory images and universal ideas or abstract concepts Those who like Hobbes Berkeley or Hume deny universals or abstractions as any part of the mind s content see no special problem in the origin of that part of the mind s content which is not received as sense impressions The original impressions are somehow externally caused and all the rest of the mind s content—its images and memories and all constructions of the sort Locke calls complex ideas —then arise by natural derivation from the original sense impressions

But those who on the contrary maintain that ideas or concepts are *not* images of any sort cannot avoid the problem of how the mind comes by its ideas One solution of this problem attributes existence to ideas as intelligible objects and attributes to the mind the power to apprehend them by direct intuition just as the senses directly apprehend sensible objects But if ideas whether or not they exist outside the mind cannot be apprehended intuitively then what is the origin of the ideas whereby the mind understands intelligible objects?

To this question the doctrine of reminiscence is one answer Another answer is the doctrine of abstraction as formulated by Aristotle and Aquinas Locke and James also seem to recognize a distinction in kind between abstractions and other mental content but they do not appear to find any need for a special power to perform the act of abstracting general ideas or universal concepts from the sensory particulars of perception and imagination Aquinas however thinks that a special faculty called the active intellect must be postulated to account for the mind s possession of the ideas or concepts whereby it actually understands what it cannot perceive or imagine

These theories are considered in the chapters on Idea and Mind But just as the doctrine of reminiscence is relevant here for its bearing on the discussion of memory so the doctrine of abstraction which posits an active intellect is relevant to the discussion of imagination

Imagination writes Aristotle is different from either perceiving or discursive thinking though it is not found apart from sensation or judgment without it That this activity is not the same kind of thinking as judgment is obvious For imagining lies within our own power whenever we wish (e g we can call up a picture as in the practice of mnemonics by the use of mental images) but in forming opinions we are not free we cannot escape the alternatives of falsehood or truth

The point is not that images cannot be false They frequently are as (according to Aristotle) sensations never are But the falsity of our imaginations involves a judgment that things really are as we imagine them to be If imagination is not accompanied by judgment the question of truth or falsity does not arise for in pure imagination we are not concerned with the way things actually exist but with the possible i e the imaginary rather than the real Everyone knows the difference says James between imagining a thing and believing in its existence

Conceiving imagination as an activity depending upon the prior activity of the senses, Aristotle holds that imagination is incapable of existing apart from sensation In this he does not differ from other psychologists But he also holds that rational thought which for him is quite distinct from imagination cannot exist apart from imagination "To the thinking soul images serve as if they were the contents of perception That is the why the soul never thinks without an image

Aristotle is here saying more than that a special faculty of mind or intellect abstracts the universal form—or what Aquinas calls the intelligible species —from the sensory matter of the image or what Aquinas calls the phantasm Aristotle is, in addition insisting that the act of understanding is always accompanied by imaginative activity The kind of thinking which depends upon the abstraction of ideas from imagery also depends upon the presence of images when the thinking takes place The faculty of thinking says Aristotle thinks the forms in the images or as Aquinas expresses it "for the intellect to understand actually not only when it acquires new knowledge but also when it uses knowledge already acquired there is need for the act of imagination It must of

necessity turn to the phantasms in order to perceive the universal nature existing in the individual The cooperation of the imagination with the intellect is shown, furthermore by the fact that when the act of imagination is hindered by a lesion of the corporeal organ we see that a man is hindered from understanding actually even those things of which he had a previous knowledge

Augustine on the contrary refers to things which we know within ourselves without images When we consider numbers for example it is not their images which are in [our] memory but themselves The question of imageless thou ht—of thinking abstractly without the use of images—seems to be peculiarly insistent in sciences like mathematics metaphysics and theology in which the conceivable may not be imaginable The objects peculiar to these sciences seem to require the scientist to do without imagery or as Aquinas says to rise above his imagination

This may be true even in physics Atoms according to Lucretius are conceivable but they are no more imaginable than they are perceptible If we need images to think of them we must use imagery in a metaphorical way picturing the atom as the smallest particle imaginable—only more so! To the objection that there must be imageless thought if we can think of in orporeal beings of which there can be no images or phantasms Aquinas repl es that we do so by comparison with sensible bodies of which there are phantasms

ARISTOTLE S THEORY that the operations of thinking are always dependent on (though not reducible to) acts of imagination does not imply that imagination is always accompanied by abstract or rational thought Normally human thinking and knowing is a work which combines both sense and intellect both reason and imagination but sometimes even in man imagination may be active without judgment or reason ng Brute animals according to Aristotle are largely guided by their imag nations because of the non-existence in them of mind But when imaginat on takes the place of thought in men it is because of the temporary eclipse of their minds by passion or disease or sleep

Dreaming seems to be the striking case of imagination divorced from reason s judgment or control It has long been suspected that animals also dream but the question whether they can distinguish their dreams from their waking perceptions may prove forever unanswerable Philosophers and psychologists have however asked themselves whether there is any way of being certain of the difference between waking thought and the phantasmagoria of dreams

Descartes for example asks How do we know that the thoughts that come in dreams are more false than those that we have when we are awake seeing that often enough the former are not less lively and vivid than the latter? It seems to him that there are no certain indications by which we may clearly distinguish wakefulness from sleep Even as he writes these words he can almost persuade himself that he is dreaming Yet he does find one probable sign whereby to tell dreaming from waking Our memory he observes can never connect our dreams with one another or with the whole course of our lives as it unites events which happen to us while we are awake

Aquinas finds other evidences of the difference When a man is fully asleep he does not dream at all for his imagination is inactive as well as his senses and his mind But as sleep passes gradually into waking his faculties begin to act again not merely the imagination but the reason also so that a man may judge that what he sees is a dream dis erning as it were between things and their images Nevertheless the common sense remains partly suspended and therefore although it discriminates some images from reality yet it is always deceived in some particular Even while a man is asleep his sense and imagination may be to some extent free and similarly the judgment of his intellect may be unfettered though not entirely Consequently if a man syllogizes while asleep when he wakes up he invariably recognizes a flaw in some respect

APART FROM QUESTIONS of truth and falsity or reality and illusion the nature and causes of dreaming are perennial themes in the trad t on of western thought As different suppositions are made concern ng the cause of dreams so different interpretations are given of their content

When it is supposed that the dream is inspired by the gods or is a divine visitation it becomes a medium of divination or prophecy—a way of foretelling the future or of knowing what the gods intend in general or for the guidance of some particular man In the great books of ancient poetry and history and in the Old Testament as well dreams like oracles are interpreted as supernatural portents and figure as one of the major sources of prophecy Aristotle discounts both the fulfillment of dreams and their non fulfillment for coincidences do not occur according to any universal or general law Regarding prophetic dreams as mere coincidences he does not find it surprising that many dreams have no fulfillment From the fact that certain of the lower animals also dream he thinks it may be concluded that dreams are not sent by God nor are they designed for the purpose of revealing the future

Instead Aristotle proposes natural causes for the origin of dreams Slight stimulations of the sense organs awaken the dream process and determine its content Dreamers fancy that they are affected by thunder and lightning when in fact there are only faint ringings in their ears or that they are walking through fire and feeling intense heat when there is only a slight warmth affecting certain parts of the body Lucretius similarly explains dreams by natural causes but attributes their content to events which have dominated the thought of waking life

On whatever things we have before spent much time he writes so that the mind was more strained in the task than is its wont in our sleep we seem mostly to traffic in the same things lawyers think that they plead their cases and confront law with law generals that they fight and engage in battles sailors that they pass a life of conflict waged with winds This is true even of animals Strong horses when their limbs are lain to rest Lucretius continues yet sweat in their sleep and pant forever and strain every nerve as though for victory

And hunters dogs often in their soft sleep yet suddenly toss their legs and all at once give tongue and again and again sniff the air with their nostrils as if they had found and were following the tracks of wild beasts

IN THE TRADITION of the great books modern writers like their ancient forebears appeal thus to sensation and memory as the natural causes of the origin and content of dreams But except for daydreams or waking fantasy they do not observe that dreaming may be even more profoundly a product of desire If Freud s extraordinary insight on this point is supported by all the evidences he assembles in his great work the *Interpretation of Dreams* then the lateness of this discovery may be thought even more extraordinary than the theory itself

The theory is not simply that the content of dreams is determined by desires When Oedipus tells Jocasta of his fear that in taking her to wife he has unwittingly married his mother she tells him to fear not for many men ere now have so fared in dreams also If that is so then such dreams do not call for the interpretation which Freud gives If there are men who suffer from what Freud calls the Oedipus complex involving repressed incestuous desires then the expression of those desires in dreaming will not take the form of imagining them to be actually fulfilled

On the contrary Freud s theory of dream symbolism holds that the dream as remembered is not the real thing at all but a distorted substitute Beneath what he calls the manifest dream content —the actual moving images which occupy the dreaming consciousness—lie the latent dream thoughts which are distorted in the actual dream This distortion is due to the activities of censorship directed against the unacceptable unconscious wish impulses invariably of an objectionable nature offensive from the ethical aesthetic or social point of view things about which we do not dare to think at all or think of only with abhorrence The repressed desires or wishes the loves or fears which the dreamer refuses to acknowledge consciously must therefore appear in dreams in a disguised form The imagery of dreams seems to Freud to be a kind of language in which the repressed materials of thought and feeling employ a special symbolism to express what the moral censor will not permit us to express in the ordinary language of our conscious thought or social conversation

As ordinary language contains symbols conventionally agreed upon so Freud finds that

the recurrence again and again of certain images in the dreams of neurotic patients and of normal persons as well gives them the character of conventional symbols The number of things which are represented symbolically in dreams is according to Freud not great They are he says the human body as a whole parents children brothers and sisters birth death nakedness—and one thing more The only typical that is to say regularly occurring representation of the human form as a whole is that of a *house* When the walls are quite smooth the house means a man when there are ledges and balconies which can be caught hold of a woman Parents appear in dreams as *emperor* and *empress* *king* and *queen* or other exalted personages Children and brothers are less tenderly treated being symbolized by little *animals* or *vermin* Birth is almost invariably represented by some reference to *water*

For dying we have setting out upon a *journey* or *travelling* by train *Clothes* and *uniforms* stand for nakedness The one thing more which Freud mentions in his enumeration comprises the sexual organs and acts In contrast to all the others these he says are represented by a remarkably rich symbolism

An overwhelming majority of symbols in dreams are sexual symbols

Freud points out why it would be a mistake to treat dream symbols like the words of an ordinary language Their object is not to tell anyone anything they are not a means of communication on the contrary it is important to them not to be understood Wresting their secret from such symbols is a remarkable achievement Aristotle s remark which Freud quotes that the most skilful interpreter of dreams is he who has the faculty of observing resemblances seems to be born out in the Freudian method of discovering the latent content of the dream symbolism But Freud s therapeutic use of what can thus be discovered makes the psychoanalytic method a thing totally unanticipated by any of his predecessors

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in hea y type which are the volume and page n mbers of the passa es referred to For example in 4 Ho ɪᴇʀ *Iliad* ʙᴋ ɪɪ [265 283] 12d the number 4 is the number of the volume in the set the number 12d ind cates that the pas sage is in section d of page 12

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lower halves of the page For example in 53 JAMES *Psychology* 116a 119b the passage begins in the upper half of page 116 and ends in the l wer half of page 119 When the text is printed in two columns the letters a nd b efer to the upper and lo ver hal es of the left ha d side of th p ge the lette s c and d to the upper and lower halves of the right hand s de of the page. F r example n 7 PLATO *Symposium* 163b-164c the passage begins in the lo ver half of the left hand side of page 163 and ends in the upper half of th r ght hand side of page 164

AUTHOR S DIVI IONS One or more of the main d v s ns of a work (such as PART BK CH SECT) are sometimes incl ded in the ref rence *line numbers in brackets are given in cer tain cases e g Il ad* BK II [265 283] 12d

B BL REF RENCES The references to book chapter and verse Wh n the King James and D uay versions differ in title of books or in th numbering of chapters or verses the King James version is cited first and the Do ay indicated by a (*D*) follows *e g* OLD TE TA MENT *Nehemiah* 7 45—(*D*) *II Esd as* 7 46

SYM LS The abbreviation esp calls the reader s attent to one or more especially rele ant parts of a wh le reference p ss m signifies that the top is d scussed intermit tently rather than continuou ly n the ork or passage cited

For add tio al information concerning the style of the references see the Explanation of Reference Style for general guid nce in the use of *The Great Id as* consult the Preface

1 The f cult es of memory and imagin t on n brutes and men

7 PLATO *Thea tetus* 538d 541a / *Ph l bus* 621a b

8 ARI TOTLE *Mem ry a d Rem n scence* CH I 690 692b C I 2 [453 5-14] 695b

9 ARISTOTLE *Eth s* BK VII CH 3 [1147b3-6] 397d

10 GALEN *Nat ral Facult es* BK I CH 12 173a b

17 PLOT NU *Fourth Ennead* TR I CH 25 31 154d 158c TR V CH I 17 159a 166d pass m TR VI CH 3 190b 191c

18 AL U TIN *Conf ons* BK X par 2 36 74b 80d

19 AQUINAS *S mn Theol g ca* PART I Q 78 A 4 411d 413d

20 AQUINAS *S mma Th log c* PART I II Q 51 A 3 14b 15

23 HO BES *Le th* PART I 49a 54c c p 50a d PART IV 258b c 267b

25 M NT IGN *Essay* 229d 230b

30 BA ON *Ad ncement of Lea g* 32d 55a d

31 D SCARTE *Rul* XII 19d 20d / *Di u se* ART I 41d / *M d t t o s* VI 96b-97a 98d 99 / *Obj cti s and Repli s* DEF II 130a b 208d 209a 209b c

31 S INOZA *Eth cs* PART II PRO 17 SCHOL 381b d PROP 18 CHO 382 b

35 LOCKE *Human U derstandi g* BK II CH X 141b 143d esp CT I 143 d

38 ROUSSEAU *I qual ty* 341d 342a

42 KANT *Pur Re son* 41c-42b 54b 55a 58 b 194d 195a / *Judgement* 542b 543c

49 D R IN *Desc nt of Man* 291d 292b 412d 480c 481b

53 JAMES *Psychology* 1a 2b 396a 413a 418a b 421a 433a esp 424b-427 484a 501b

54 FREUD *Interp et t on f Dreams* 352a d / *G eral Int duct on* 527a

1a The l tion of memory nd imaginat on to nse the *a priori g* ounds of poss ble experience n the synthesis of intu t on r prod ct on and recogn t on

7 PL TO *Thea t t* 523d 524a 538d 541a / *Ph l bus* 621a b

8 ARI OT E *Posteri Analytics* K II CH 9 [99b36-1 6] 136b c / *M taphys cs* BK I CH I [980 28 b 4] 499 b / *S l* BK I CH 3 [4 8 2 16] 660b [4 8b o-429a9] 660d 661b / *Memory and Rem ence* H I 690a 692b

9 AR TOTL *Mot on f Animals* H 7 [70 b 13]-CH 8 [702a] 237a / *Rhet c* K CH [1370a28-31] 613c

17 PLOTINUS *F urth E d* TR III CH 29 157b d TR IV CH 8 161d 162b TR VI 189b 191c

12 AURELIUS *Meditations* BK IX SECT 7 292b
13 VIRGIL *Aeneid* BK I [194 207] 108a b [441 493] 115a 116b BK II [1 12] 124a
17 PLOTINUS *Fourth Ennead* TR III CH 28 156d 157b
18 AUGUSTINE *Confessions* BK VIII par 25 27 60 c BK X par 30 79b-c
19 AQUINAS *Summa Theologica* PART I Q 81 A 3 REP 2 430c-431d PART I-II Q 1 A 1 REP 3 609b-610b Q 17 A 7 690d 692a Q 3 A 3 760d 761c
20 AQUINAS *Summa Theologica* PART III Q 13 A 3 REP 3 782b-783b
23 HOBBES *Leviathan* PART I 61a b
25 MONTAIGNE *Essays* 36c-40a 236b-d 316b-c
27 SHAKESPEARE *Othello* ACT III SC III [321 480] 225c 227b / *Macbeth* ACT I SC VII [1 28] 289b-c ACT II SC I [33-61] 290d 291a ACT III SC II [8-36] 296c d SC IV [38 108] 298a d
29 CERVANTES *Don Quixote* PART I 57c 58d PART II 285a 288c esp 286c 287b
30 BACON *Advancement of Learning* 55b d 67a b
31 DESCARTES *Rules* XII 19d 20a
31 SPINOZA *Ethics* PART III PROP 12-57 400b-415b passim PART IV PROP 9-13 426d-428a PART V PROP 34 DEMONST 460c d
35 LOCKE *Human Understanding* BK II CH XXXIII 248b-251d passim esp SECT 7 15 249b-250c
36 STERNE *Tristram Shandy* 194a
38 ROUSSEAU *Inequality* 341d 345d 346b
51 TOLSTOY *War and Peace* BK V 210b-c
53 JAMES *Psychology* 13a 15a 704b-705a 759a 760a 767b 792b esp 767b-768a 771a, 773a b [fn 1] 792b
54 FREUD *Interpretation of Dreams* 353b 363b 364d esp 363d 364a 377c 378d

2 The activity of memory

7 PLATO *Theaetetus* 538d 541a
8 ARISTOTLE *Topics* BK IV CH 5 [125ᵇ15 19] 174d / *Memory and Reminiscence* 690a 695d
17 PLOTINUS *Fourth Ennead* TR III CH 25 31 154d 158c passim TR IV CH 1 7 159a 166d passim TR VI CH 3 190b-191c
18 AUGUSTINE *Confessions* BK X par 12 36 74b-80d
23 HOBBES *Leviathan* PART I 53a-c
31 SPINOZA *Ethics* PART II PROP 18 SCHOL 382a b PART V PROP 11 13 456a b
35 LOCKE *Human Understanding* BK II CH X 141b-143d CH XIX SECT 1 175b-c
53 JAMES *Psychology* 1b-2b 421a-451b
54 FREUD *Interpretation of Dreams* 352a-c / *General Introduction* 527a b

2a Retention factors influencing its strength

7 PLATO *Phaedrus* 138d 139a / *Gorgias* 262a / *Republic* BK VII 399c / *Timaeus* 446b-c / *Theaetetus* 540d 541a
8 ARISTOTLE *Memory and Reminiscence* CH 1 [449ᵇ3-9] 690a [450ᵃ26-ᵇ12] 691a c
17 PLOTINUS *Fourth Ennead* TR III CH 29 157c d TR IV CH 8 161d 162b TR VI CH 3 190b 191c
18 AUGUSTINE *Confessions* BK X par 12 14 74b 75a par 16 75b-c par 20 27 76b 78c
20 AQUINAS *Summa Theologica* PART I II Q 50 A 3 REP 3 8b 9a Q 51 A 3 14b 15a
23 HOBBES *Leviathan* PART I 53a
25 MONTAIGNE *Essays* 236c
30 BACON *Advancement of Learning* 61d 62c / *Novum Organum* BK II APH 26 156a 157a
31 DESCARTES *Meditations* II 81d / *Objections and Replies* 208d 209a
35 LOCKE *Human Understanding* BK II CH X SECT 3-6 141c-142c CH XXIX SECT 3 234b-c
36 STERNE *Tristram Shandy* 234b 236b
53 JAMES *Psychology* 1b-2a 277a 421b-424a passim esp 422a 424a 427b-441a esp 428b 448b-450a 849a b
54 FREUD *Hysteria* 27a 28c / *Interpretation of Dreams* 145b 155a 157a esp 155c 369a b / *Civilization and Its Discontents* 769a 770c

2b Recollection factors influencing ease and adequacy of recall

7 PLATO *Symposium* 165c 166b / *Timaeus* 446b-c / *Philebus* 621a-c
8 ARISTOTLE *Topics* BK VIII CH 14 [163ᵇ17-34] 222b c / *Memory and Reminiscence* CH 1 [449ᵇ3-9] 690a CH 2 692b 695d
9 ARISTOTLE *Rhetoric* BK III CH 9 [1409 35 ᵇ8] 660d 661a
18 AUGUSTINE *Confessions* BK X par 12 14 74b 75a par 16-18 75b 76a par 25 36 77c 80d
23 HOBBES *Leviathan* PART I 53b-c
30 BACON *Advancement of Learning* 59a b 62b-c / *Novum Organum* BK I APH 26 156a 157a
31 DESCARTES *Objections and Replies* 208d 209a
31 SPINOZA *Ethics* PART V PROP 11 13 456a b
35 LOCKE *Human Understanding* BK C III SECT 21 118b-119a BK II CH X SECT 2 141b-c SECT 7 142c d
51 TOLSTOY *War and Peace* BK X 422b
53 JAMES *Psychology* 1b 2b 163a b 362b 364a 371a 372a 382a 385b esp 382b 383a 423a 424a 427b-431b esp 428a b 433a 434a 438a-440b
54 FREUD *Hysteria* 32c 33d / *Interpretation of Dreams* 156b-157a 353d 354a / *Unconscious* 438b-d / *General Introduction* 485a-486a 488c-489c 566c 567b / *Ego and Id* 697d 698d 700b-c

2c The association of ideas controlled and free association reminiscence and reverie

7 PLATO *Republic* BK V 361a
8 ARISTOTLE *Memory and Reminiscence* CH 2 [451ᵇ10-453 3] 693a-695d

(2 *The acti ty of memory* 2c *The association of ideas cont olled and free associat on rem niscence and re erse*)

23 HOBBES *Leviathan* PART I 52b 53b 67d 69b c
26 SHAKESPEARE *Richard II* ACT V SC V [1 41] 349d 350a
29 C RVANTES *Don Quixote* PART I 1a 3b 18d 19b 50b 52d 134b 135d
31 DESCARTES *Objections and Repl es* 143a c
31 SPINOZA *Ethics* PART II PRO 18 381d 382b PART III PROP 14 17 400d 402a
35 LOCKE *Human Understanding* BK II CH XXXIII 248b 251d
35 BERKELEY *Human Knowledge* SECT 30 418c
35 HU IE *Human Under tand ng* SECT III 457c 458a SECT V DIV 41 45 467d 469c passim
36 STERNE *Tristram Shandy* 193a 194b 319a 320b 393a 394a
42 KANT *Pu e Reason* 51c d / *Judgement* 493c d 528c 529b
49 DARWIN *Descent of Man* 292d 293a
51 TOLSTOY *W a and Peace* BK II 82a d BK III 125b c 146d 148c K VI 254a BK VII 293c 295a BK X 394d 422b c 443c 444a 464a-465c esp 464d-465a BK XIV 608c d BK XV 615a 616a
53 JA E S *P ych l gy* 360a 395a esp 370a 385b 667a 678b passim 827a 83 a
54 FREUD *Hysteria* 65a 67b esp 66c-67b 74a 79d esp 74a 77b / *Interpret tion of Dreams* 180b 181b 253d 254a 347b 350 esp 348a 349 352b c 375b 376a / *Repressi n* 423c d / *General Introduction* 486b 489c esp 486d 488a

2d Recogn tion with or without recall

7 PL TO *Theaetetus* 538d 541a
18 AUGUSTINE *Co f ssions* BK X par 27 28 78b d
35 LOCK *Human Understa ding* BK I CH III SECT 21 118b 119a BK II CH X SECT 2 141b c SECT 7 142c d
53 JAME *Psychology* 163b 384 440b-441a esp 441b-442b [fn 2]
54 FREUD *Hysteria* 33c 79a d pass m

2e The scope and range of normal memory f ilure or defect of memory and ts cau es

4 HOME *Odyssey* BK IX [82 104] 230
7 PLATO *Pha d us* 138c 141a c / *Ph lebus* 621a b
8 ARISTOTLE *Memory a d Rem niscence* CH I [45 26-451 19] 691 692b
12 LUCRETI S *Nat e of Th gs* BK III [830-869] 40c-41
17 PLOTI US *Fourth E ead* TR III CH 29 157c d
18 AUGUSTI E *Conf ss ons* BK X par 12 36 74b-80d
21 DANTE *Di e Comedy* PURG TORY XXXI [91 111] 101d 102a XXXIII [79-102] 105 b PARADISE I [1 12] 106a XXXIII [46-7] 156c 157a
25 MONTAIGNE *Essays* 15a 16c 236c d 316a 317a 465c 466c
35 LOCKE *Human Understa d ng* BK II CH X SECT 4 5 141d 142b CH XXIX SECT 3 234b c BK III CH III SECT 2 254d 255a
36 STERNE *Tristram Shandy* 234b 236b
40 GIBBON *Decline and Fall* 88d
51 TOL TOY *W ar and Peace* BK III 129d 130b
53 JAMES *Psychology* 131a 179a b 216a b 240a 258b 443a 450a 841b 842a 844b
54 FREUD *I terpretation of Dreams* 155 156a 341b 345b passim / *General Introduction* 453b 456a esp 454b 455b 526d 527c 561c 562b

2e(1) Forgetting as a function of the t me elapsed

18 AUGUSTINE *Confessions* BK X par 18 75d 76a
20 AQUINAS *Summa Theolog ca* PART III SUPPL, Q 98 A 7 REP 3 1076d 1077b
23 HO BES *Leviathan* PART I 50b c
25 MONTAIGNE *Essays* 404 b
26 SHAKESPE RE *Henry V* ACT IV SC III [40-67] 556a b
35 LOCKE *Human Understand ng* BK II CH X SECT 5 142a b
51 TOLSTOY *War and Peace* BK X 422b-c
53 J MES *Psychology* 438a b

2e(2) The obliviscence of the disagreeable confl ct and repression

25 MONTAIGNE *Essays* 177d 180b esp 180a b 236b d
49 DARWIN *Descent of Man* 312b
51 T LSTOY *W ar and Peace* BK V 200c d BK IX 355d 356a BK XIV 605c d BK X 616a 617 630b-c
54 FREUD *Origin a d Development of Psycho Analysis* 6d 8b 13a b / *Hysteria* 65b 66a 82b-d / *Interpr t t on of D eams* 343c 345a esp 344d 345a 346d 347a 378b 380d esp 378b 379 / *Repress o* 422d-425b / *General Int ducti n* 464b-467a 472c-475a esp 474a 566a 567a 579d / *Inhibitions Sympt ms and A x ety* 720a d 732b-c / *New Introductory Lect es* 811a b

2e(3) Organic lesions amnes a and the apha sias

8 ARISTOTLE *Memory and Rem scence* CH I [45 26-b12] 691a-c CH 2 [453b1 11] 695d
19 AQUINAS *Summa Theologica* P RT I Q 84 A 7 ANS 449b 450b
35 LOCKE *H man U dersta d g* BK II C X S CT 5 142b
49 DARWIN *Desce t of Man* 299c
53 J MES *P ych l gy* 25b 26b 32a 34a 35b-37b 241b 258b esp 251b 252a 258a b 447a 448a b 490a-493a passim
54 FREUD *Civil at on and Its D sco tents* 7 0a

2 (4) False memories illusions of memory· *déjà vu*

8 ARISTOTLE *Memory and Rem ni cence* CH I [451 8-12] 692a
51 TOLSTOY *W ar and Peace* BK VII 293c 295a BK X 393a b
53 JAMES *Psychology* 241a b 442a
54 FREUD *General I troduction* 597b 599b esp 597b d

Remembering s an act of knowledge and s a source of knowledge

7 PLATO *Phaedr s* 124c 126c / *Meno* 179d 183a / *Ph edo* 228a 230d / *Rep blic* BK VI 374d 375a
8 ARISTOTLE *P sterior Analytics* BK II CH 19 [99b34 10 *9] 136b-c / *Top cs* BK II CH 4 [111b24 31] 156d 157 / *Met phys s* BK I CH I [980 28-981 1] 499a b / *Memory and Rem in scence* CH I 690 692b
17 PLOTINU *Fourth Ennead* TR III CH 25-31 154d 158c passim TR IV CH 1-17 159a 166d pass m TR VI CH 3 190b 191c
18 AUGUSTINE *Conf s ions* BK X par 2 36 74b 80d / *Ch tian Doctrine* BK II CH 9 640c d CH 14 643b BK IV CH 5 677b c
19 AQUINAS *Summa The l gica* PART I Q 78 A 4 ANS and REP 5 411d-413d Q 79 AA 6 7 419b 421c Q 84 A 3 R P 3 443d-444d Q 89 A 6 EP I 478b d
20 AQUINAS *Summa Theologica* PART III SUPPL, Q 7 A 2 REP 4 896 897d
21 DANTE *D v ne C medy* PARADISE V [34-42] 112c
23 HO BES *Leviath n* PART I 53a d
30 BA ON *Adva cement of Lea i g* 32d 61d 62c
31 D SC RTES *Rul* III 4d VII 10b c VI I 14b XI 17b-18b X 18c 19d 20d / *D s co s* RT 41d / *Meditations* V 95d / *Object ns and Repl* 125a b
33 PASCAL *Pens* 369 236b
35 LO K *Human U der ta d g* BK I CH III SECT I 118b 119a BK I CH X ECT 2 141b S CT 8 142d 143a BK IV CH I ECT 8-9 308b 309b
46 HEGEL *P l losophy f Righ* PART I pa 69 30b c
53 J IES *P y hol gy* 145 396a 397 424b-427a 450a-451b
54 F EUD *U on ci us* 428d / *G eral I t o d ic n* 484c-486a esp 485a b

3a Rem n sc n e s the p oces of all learn ng nnate id as or seminal reasons

7 PLATO *Ph edrus* 124c 126 / *M* 179d 183 188d 189 / *Ph edo* 228 230d / *Th t tus* 515d 517b
8 ARIS OTLE *Posterio An ly t cs* BK II CH 19 [93b 0-33] 136a b / *M t phys s* BK I C 9 [992b24-993 1] 511 c / *Mem ry a d Rem n s ence* CH 2 [451 19-452 3] 692b 693d

10 GALEN *Natural Facul ies* BK I C I 12 173a b
12 EPICTETUS *Discou rses* BK II CH 11 150a c
17 PLOTINUS *First Ennead* TR II CH 4 8b-c / *Fou th Ennead* TR III CH 25 26 154d 156c TR IV CH 5 160d 161b
18 AUGUSTINE *Confessions* BK X par 10 73d 74a par 16-19 75b 76b par 26-38 78a 81a / *City of God* BK VIII CH 6 269b c / *Christ an Doctrine* BK I CH 9 627a
19 AQUINAS *Summa Theolog ca* PART I Q 54 A 4 ANS and REP I 287b 288a Q 55 A 2 289d 290d Q 57 A I REP 3 295a d Q 58 A I 300c 301a Q 60 A 2 ANS 311a d Q 84 A 3 443d-444d A 4 ANS 444d-446b A 6 ANS 447c-449a Q 89 A I REP 3 473b 475a Q 117 A I NS and REP 4 595d 597c
25 MONTAIGNE *Essays* 264b 265b
28 H RVEY *On An mal Generation* 333d 334d
30 BACON *A l cement of Learni g* 1b c
31 DESCARTES *Rules* IV 5 d 6d VI 8d 9a VIII 13c d / *D scourse* PART V 54c PART V 62a / *Meditations* II 77d 81d pass m III 83b 88c d / *Objections and Replies* 120c d 140 215b c 224b d 225a
31 SPI OZA *Eth cs* PART V PROP 23 SCHOL 458c d
35 LOCKE *Hum n Underst d g* 90d 91b BK I 95b d 121a c pa sim esp CH I SECT 15 16 98d 99c SECT 23 101b 102a CH III SECT 21 118b 119a BK II CH I SECT I 121a b SECT 6 122b c H IX SECT 6 139a
35 HU E *Human Understa ding* SECT II DIV 17 457b d [fn 1]
42 KANT *Pu e Re son* 113b 115a / *Practical Reason* 352c 353a
53 J M S *P ycl ology* 851a 862a esp 851a 852b 856 800a 867 868a 879b 880 889a b 897a b

3b Sensitive and intellectual memory knowl dge of the past and the habit of knowl edge

7 PLATO *Theaet tus* 538d 544a
8 A TOTLE *T pics* BK II CH 4 [111 b 4 31] 156d 157a BK IV CH 4 [1 5b4 4] 174c BK VI H 2 [57b11 16] 214a / *So l* BK CH 5 [43 20 25] 662d / *Memory a d Rem i en* CH I [449b3 450a26] 690a 691a CH 2 [451 19 b6] 692b d
17 PLO INUS *F th Enne d* TR III CH 5 3 154d 158 p im
18 A GUSTINE *C f s s* BK X p r 16-9 75b 76b par 23 25 77a d p 30 79b c par 36 80c d / *C ty f God* BK XXII CH 3 618a
19 AQU NA *Summa Th log a* ART I Q 54 A 5 288 d Q 77 A 8 R 4 406b-407a Q 79 AA 6 7 419b-421c Q 89 A 6 R I 478b d
20 AQU NA *Summ Theol g* P RT I Q 51 A 3 14b 15a PART I UPPL Q 7 A 2 REP 4 896a 897d
23 HO S *Lev athan* P RT I 53a 54 60a b 65c

(3 *Remembering as an act of knowledge and as a source of knowledge* 3b *Sensitive and intellectual memory knowledge of the past and the habit of knowledge*)

31 DESCARTES *Rules* III 4c d VI 17b 18b
31 SPINOZA *Ethics* PART II PROP 18 SCHOL 382a b PART V PROP 21 458a
35 LOCKE *Human Understanding* BK I CH III SECT 21 118b 119a BK II CH X SECT 2 141b-c SECT 7-8 142c 143a BK IV CH I SECT 8-9 308b 309b CH XI SECT 11 357b-c CH XVI SECT 1 2 366d 367a
38 ROUSSEAU *Inequality* 341d
53 JAMES *Psychology* 324a 424b-427a esp 424b-425b [fn 3] 433a-434a 450a-451b

3c The scientist's use of memory collated memories as the source of generalized experience

8 ARISTOTLE *Posterior Analytics* BK II CH 19 [99b34 100a9] 136b-c / *Metaphysics* BK I CH 1 [980a28-981b3] 499a 500a
28 GILBERT *Loadstone* PREF 1a 2d
28 HARVEY *Motion of the Heart* 273d / *On Animal Generation* 332a 335 esp 334c d
30 BACON *Advancement of Learning* 59a b / *Novum Organum* PREF 105a 106d BK I 107a 136a c esp APH II 26 107d 108d, APH 97-98 126c 127b APH 1 5 128b-c
31 DESCARTES *Rules* III 4c d VII 10b 12a passim VIII 14b XVI 33d 35c / *Discourse* PART II 47c d
33 PASCAL *Vacuum* 355a 358b
53 JAMES *Psychology* 385a b 677b 678a

3d Memory as the muse of poetry and history the dependence of history on the memory of men

4 HOMER *Iliad* BK II [484 493] 14d 15a / *Odyssey* BK I [1 10] 183 BK III [62-82] 222d 223a [4?9-?2] 226d 227b
6 HERODOTUS *History* BK I 1a BK III 114a
6 THUCYDIDES *Peloponnesian War* BK I 353d 354c BK V 489a b 500d 501a
7 PLATO *Timaeus* 443d-444c / *Critias* 479a b
13 VIRGIL *Aeneid* BK VII [641-646] 254a
14 PLUTARCH *Pericles* 128d 129a
15 TACITUS *Annals* BK III 48c BK I 66b-d
21 DANTE *Divine Comedy* HELL, I [1-9] 2c PARADISE I [1 12] 106a XXXIII [46-7?] 156c 157a
23 HOBBES *Leviathan* PART I 71c
25 MONTAIGNE *Essays* 41b-42a 199c-d 305b-306a
30 BACON *Advancement of Learning* 13d 14b 32d 33b 34c 38c 39a
33 PASCAL *Pensées* 626 286b
36 SWIFT *Gulliver* PART IV 169a
36 STERNE *Tristram Shandy* 193a 194b
40 GIBBON *Decline and Fall* 88c d 296a 354c-d 413b-d
41 GIBBON *Decline and Fall* 337c 501c 503a passim esp 502a
44 BOSWELL *Johnson* 1b-c 3d-4a
46 HEGEL *Philosophy of History* INTRO 153a 154c 181a 182a PART I 239c 240a 247d 248a
47 GOETHE *Faust* DEDICATION 1a b
51 TOLSTOY *War and Peace* BK III 134a-c BK IX 366d 367b

4 The contribution of memory the binding of time

4a Memory in the life of the individual personal identity and continuity

4 HOMER *Odyssey* BK IX [82-104] 230a
7 PLATO *Phaedrus* 138c 140a / *Republic* BK VI 374d 375a / *Philebus* 614a-c
8 ARISTOTLE *Soul* BK III CH 5 [430a20-25] 662d
9 ARISTOTLE *Rhetoric* BK II CH 12 [1389a?0-4] 636c CH 13 [1390 6-10] 637b-c
12 LUCRETIUS *Nature of Things* BK III [670-6 8] 38d [83 -869] 40c-41a
13 VIRGIL *Aeneid* BK I [441 493] 115a 116b BK II [1 1] 124a BK VI [703 75] 229b 231a
17 PLOTINUS *Fourth Ennead* TR III CH 25 31 154d 158c passim TR IV CH 1 17 159a 165d passim
18 AUGUSTINE *Confessions* BK XI par 1, 35 93b-98c esp par 36-38 97d 98c
20 AQUINAS *Summa Theologica* PART III SUPPL Q 8 A 1 997b 998c Q 98 A 7 1076d 1077b
21 DANTE *Divine Comedy* PURGATORY XXXI XXXIII 100d 105d passim
25 MONTAIGNE *Essays* 15a 16c 236b-23 a 316a 317a 465c-466c
31 DESCARTES *Meditations* VI 103a d
35 LOCKE *Human Understanding* BK II CH XXVII SECT 9-26 222a 227d passim esp SECT 20 225c d
40 GIBBON *Decline and Fall* 544c 545d
47 GOETHE *Faust* PART I [7 9-784] 20b
48 MELVILLE *Moby Dick* 19a 20a
49 DARWIN *Descent of Man* 29 a-c
51 TOLSTOY *War and Peace* BK X 394d
52 DOSTOEVSKY *Brothers Karamazov* EPILOGUE 411b-412c
53 JAMES *Psychology* 145a 154a 155b 213a 259b esp 214 216b 229a 230a 240a 258b 259a 396a 397a 412b-413a 418a 421 421a
54 FREUD *Origin and Development of Psycho-Analysis* 12c / *War and Death* 760a b / *Civilization and Its Discontents* 769a 770c esp 70b-c

4b Memory in the life of the group or race instinct legend and tradition

OLD TESTAMENT *Exodus* 3 15 12 14 20 13 ? 16 17 14 20 8 11 / *Leviticus* 23 24 25 / *Numbers* 15 38 41 / *Deuteronomy* 4 32 40 5 15 6 7 18 19 8 2-6 9 7 15 12 15 16 ?

12 24 17 22 32 7 / *Joshua* 1 1 13 3 14 49—(D) *Josue* 1 12 13 3 14 4 9 / *Esther* 9 25 32 / *Psalms* 102 12 135 13—(D) *Psalms* 101 13 134 13 / *Ecclesiastes* 1 11 —16 9 5 / *Isaiah* 44 21 46 9—(D) *Isaias* 44 21 46 9 / *Malachi* 4 4—(D) *Malachias* 4 4

APOCRYPHA *I Maccabees* 14 16-49—(D) OT *I Machabees* 14 16-49

NEW TESTAMENT *Matthew* 16 6-13 / *Mark* 14 3-9 / *Luke* 22 19-20 / *I Corinthians* 11 23 25

7 PLATO *Laws* BK VII 716a b 717d 718c

13 VIRGIL *Aeneid* BK I [441 493] 115a 116b BK III [84 191] 149b 152a

15 TACITUS *Annals* BK III 60d 61a

20 AQUINAS *Summa Theologica* PART I II Q 97 2 236d 237b

26 SHAKESPEARE *Henry V* ACT IV SC III [40-67] 556a b / *Julius Caesar* ACT III SC II [79-82] 584c

31 DESCARTES *Discourse* PART II 46b-c

33 PASCAL *Pensées* 626 286b

36 SWIFT *Gulliver* PART IV 169a

40 GIBBON *Decline and Fall* 88b d 97c 98c 398b 413b-d 544c-545c 627b d

41 GIBBON *Decline and Fall* 527d 528a c

43 MILL *Representative Government* 424c-425b

46 HEGEL *Philosophy of Right* PART III par 356 113a b / *Philosophy of History* INTRO 153b-c 181a 182a 186d 190b PART I 227b c 230c 231b 239c 241a PART II 259b-c 261b 263d 266a

49 DARWIN *Descent of Man* 318a c 570b 571b

51 TOLSTOY *War and Peace* EPILOGUE I 647b-c

53 JAMES *Psychology* 717a 719a esp 718b 719a 722b 725a esp 724b 725a 731b 851b 853a 858a

54 FREUD *Origin and Development of Psycho-Analysis* 4a b / *Instincts* 413c / *Unconscious* 439d / *General Introduction* 509a 513d passim esp 512b-513b 526 d 591d 592b 599a b 608c d 613a / *Group Psychology* 686c-689b esp 688d 689a 689b [fn 3] 692a 693a / *Ego and Id* 706c 708b esp 707b 708b / *War and Death* 763b-c 764d 765a / *Civilization and Its Discontents* 795b 796c 800a b / *New Introductory Lectures* 834b d

5 The activity of imagination fancy or fantasy the nature and variety of images

7 PLATO *Sophist* 577a b / *Philebus* 623d 624c

8 ARISTOTLE *Soul* BK III CH 3 659c 661b CH 11 [433b32-434 9] 666d

9 ARISTOTLE *Rhetoric* BK I CH 11 [1370a28-b29] 613c 614b

13 VIRGIL *Aeneid* BK VIII [18 25] 259b

17 PLOTINUS *Fourth Ennead* TR III CH 31 158b-c

18 AUGUSTINE *Confessions* BK X par 13-14 74c 75a

19 AQUINAS *Summa Theologica* PART I Q 1 A 9 REP 2 58b-59a Q 78 A 4 ANS 411d-413d Q 84 A 6 ANS and REP 1 2 447 449a

21 DANTE *Divine Comedy* PURGATORY XVII [1-45] 78c 79a

23 HOBBES *Leviathan* PART I 49a 52b 61a b PART III 172b d PART IV 258b-d 261a 262a c

25 MONTAIGNE *Essays* 14c 15a

26 SHAKESPEARE *Romeo and Juliet* ACT I SC IV [96-103] 291c / *Richard II* ACT V SC V [1 41] 349d 350a / *Midsummer Night's Dream* ACT V SC I [1 22] 370d 371a

30 BACON *Advancement of Learning* 66c-67b

31 DESCARTES *Rules* XII 19d 20a / *Meditations* II 79a-c VI 96b 97a 98d 99a

31 SPINOZA *Ethics* PART II PROP 17 SCHOL 381b-d PROP 40 SCHOL 2 388a b PART V PROP 34 DEMONST 460c d

32 MILTON *Paradise Lost* BK V [95 113] 177b

35 LOCKE *Human Understanding* BK II CH II SECT 2 128a b CH XI SECT 6 145a CH XII SECT 1-C XIII SECT 1 147b 149a CH XIII SECT 4-6 149b d SECT 27 154c d CH XIV SECT 24-31 160b 162a passim CH XV SECT 1-3 162c d CH XVI SECT 1 2 165c d SECT 5 166b-c CH XVII SECT 3 7 168b 169c CH XXII SECT 2 201a b CH XXIII SECT 33 37 212d 214b passim BK III CH X SECT 15 303b-c BK IV CH IV SECT 5 324d

35 BERKELEY *Human Knowledge* INTRO SECT 10 406d-407b SECT 1 413a SECT 5 414a b

35 HUME *Human Understanding* SECT I DIV 11 455b DIV 13 455d 456b SECT V DIV 39 466c d

42 KANT *Pure Reason* 173b 174a *Judgement* 493c d 528c 529c

46 HEGEL *Philosophy of History* INTRO 153a-c 155b PART I 219d 221a 254b d

49 DARWIN *Descent of Man* 29 a b

51 TOLSTOY *War and Peace* BK II 105d 106b BK V 294b 295a 297a 298a BK VI 318b-c BK XI 523d 524c BK XII 542d 543a 544a b BK XIV 601 602d 605c d

53 JAMES *Psychology* 480a 501b

54 FREUD *General Introduction* 483b 597b-599d esp 599b d / *New Introductory Lectures* 877d

5a The distinction between reproductive and creative imagination the representative image and the imaginative construct

7 PLATO *Sophist* 577c

12 LUCRETIUS *Nature of Things* BK IV [722 748] 53d 54a

18 AUGUSTINE *Confessions* BK X par 14 74d 75a

19 AQUINAS *Summa Theologica* PART I Q 12 A 9 REP 2 58b 59a Q 78 A 4 ANS 411d-413d Q 84 A 6 REP 2 447c-449a

23 HOBBES *Leviathan* PART I 50d PART IV 262a-c

30 BACON *Novum Organum* BK I APH 60 112c 113a

31 DESCARTES *Discourse* PART V 54 b / *Meditations* 76a b III 82d 83b

(5 *Th actu ty of imag nat on fancy or fantasy the natu and va ety of images 5a The d st nct on between reproduct and crea ti imag nation th repr sentat e image and the imaginat ve construct*)

31 SPINOZA *Eth cs* PART II PROP 49 SCHOL, 392c d 393c d
32 MILTON *Pa adise Lost* BK V [95 113] 177b
35 LOCKE *Human Understanding* BK I CH XXII SECT 2 201a b CH XXX 238a 239b passim
35 BERKELEY *Human Knowledge* INTRO SECT 1 406d 407a SECT 1 413a
35 HU E *Human Understand ng* SECT II DIV 13 455d-456b SECT V DIV 39 40 466c-467c
42 KANT *Pu e Reason* 89b c 173b 174a 211c 212a / *Judgement* 493 -495a c 528c 529b
53 JAMES *Psych l gy* 480a b
54 FREUD *Interpretation of D eams* 270c 271a

5b The im ge dist nguished f om the dea or concept the concrete and particular as contrasted with the abstract and uni versal

7 PLATO *C atylu* 108c 111c 113c 114a / *Phaedrus* 126b c / *Rep ibl* BK II 333c d / *Theaetetus* 534d 536a / *S venth Letter* 809c 810d
8 ARISTOTLE *Posterio Analyt cs* BK I CH 8 111b c CH 31 120a c BK II CH 19 [100 15 ^{b}5] 136d / *Metaphysi s* BK I CH I [980 8 981^{b}13] 499a 500a CH 9 [990^{b}9 15] 508d BK II C I 4 [999 24 ^{b}5] 518a b / *Soul* BK II CH 5 [417^b 7 28] 648b-c BK III CH 8 [432 9-14] 664c d
9 ARISTOTLE *Ethi s* BK VI CH 3 [1147^{b}3-6] 397d
18 AUGUSTINE *C fe si s* BK X par 16–19 75b 76b par 23 77a b
19 AQU NAS *Summa The log a* PART I Q 55 A 2 REP 2 289d 290d Q 75 A 2 REP 3 379c 380c A 3 REP 2 380c 381b Q 8 A 3 ANS 430c 431d Q 84 A 1 NS and REP 1 440d 442a A 2 N and REP 1 442b-443c AA 6-7 447c-450b Q 85 AA 1 2 451c 455b Q 86 ANS 461c-462a PART I II Q 17 A 7 N 690d 692a Q 29 A 6 A S and REP 1 3 748b 749a
20 AQUINAS *Summa Theol g c* P RT III UPPL, Q 70 A 2 REP 3 896a 897d
23 HOB S *Lev athan* PAR IV 262a b
31 DE C RTES *Di cou* PART IV 53b / *Med t t ns* II 79a-c 80a 81d III 82d 83b VI 96b-97a 98d 99a / *Obj ct ons and Replie* DEF II 130a b 136d 137a 137d 138d 211d 212a 218c d
31 SPINOZA *Ethics* P RT II PROP 44 389b 390a PROP 48 SCHOL 391b-c PROP 49 SC IOL, 391d 392c P T V PROP 34 D ONST 460c d
35 LOCKE *Human Underst nd ng* BK I CH XI SECT 8-9 145b-c CH XXX I ECT 8-9 244d 245a BK III CH VI CT 32 33 277c 278c BK I CH VII SECT 9 339a b
35 BERKELEY *Human Knowledge* INTRO SECT 6-19 405d 410c passim esp SECT 12 16 408a 409d SECT 25 27 417d-418b esp SECT 27 418a b SECT 89 430b-c SECT 135 142 440 441c esp SECT 140 440d-441a SECT 142 441b c
38 ROUSSEAU *Inequality* 341c 342a
42 KANT *Pu e Reason* 15d 16c 23a 24a 34a-c 115b c / *Judgement* 542b 543c 570c 572b
46 HEGEL *Ph losophy of History* INTRO 155b PART I 219d 220a 230c 231b 254b d
53 JAMES *P ychol gy* 305a 311a esp 307b 308b 311b 312b [fn 1] 480b 484a
54 FREUD *Unconscious* 442b 443d

5c The pathology of imagination halluci a tions persistent imagery

7 PLATO *Th a tetus* 520c 522b
8 ARISTOTLE *Memory and Reminiscence* CH 2 [453 15 31] 695b d / *D eams* CH 2 [460 31 ^{b}27] 704b d
14 PLUTARC I *Ma cus Brutus* 816d 817c
19 AQUINAS *Summa The log ca* PART I Q 12 A 2 REP 2 102a d Q 51 A 2 ANS 276b-277a Q 54 A 5 288a d Q 84 A 6 REP 1 447c 449 A 8 REP 2 450b 451b Q III A 3 ANS and REP 4 570b 571b
20 AQUIN S *Summa Theolog ca* PART I II Q 53 A 3 ANS 21d 22d
22 CHAUCER *M ller s Tal* [3611 3617] 219b
23 HOBBES *Leviathan* PART I 50d 51b-52b 80a PART III 172c d 174b PART IV 258b d 261a
25 MONTA GNE *Essays* 36c 41b 237a b 405d 406a
27 SHAKESPEARE *Ma beth* ACT II S 1 [33-61] 290d 291a A T III SC IV [38 121] 298a 299a
29 CERVANTES *D n Qu x te* esp PART I 1d 2b 4b-c 18d 22a 44b 46b 50b 52d 134b 136a PART II 285a 288c
31 DESCARTES *Rules* XII 22c 23a / *Med tat ons* I 75c 77c / *Object ons and Repl es* 209c
31 S NOZA *Eth c* PART IV PROP 44 SCHOL 437d-438a
32 MILTON *Pa ad se Lost* BK V [95 128] 177b-178a / *Sam on Agonist s* [590-605] 352b
35 HU E *H man Understand ng* SECT II DIV 455b-c
40 G B ON *D l d Fall* 598a b
44 BO I ELL *J hns n* 13 d 114b 115a
46 HEGEL *Philosophy of H story* INTRO 196d 197c
47 GOETHE *Fa t* P RT I [4405 4612] 110a 114b
48 MEL ILLE *Moby D k* 148b 150a 232b 235a
51 TOL OY *Wa and P ac* BK II 109d 110 BK VII 293c 294a BK XI 524c 527a BK XV 616a 617a
52 DOSTOEV KY *B others Ka ama ov* BK XI 337a 348d
53 J MES *Psych logy* 274a 490 -493a 506a 507a esp 507b 508b [fn 1] 515a 520a 527a 538b esp 527a 533a 662a 663 [f 1] 747b [fn 3] 842b 844a

6 The role of imagination in thinking and knowing

6a Imagination as knowledge: its relation to possible and actual experience

6b The effect of intellect on human imagination: the imaginative thinking of animals

6c The dependence of rational thought and knowledge on imagination

6c(1) The abstraction of ideas from images: the image as a condition of thought

7b The fantastic and the realistic in poetry: the probable and the possible in poetry and history

6 HERODOTUS *History* BK II 73a b
6 THUCYDIDES *Peloponnesian War* BK I 354b
7 PLATO *Phaedrus* 140a d / *Ion* 142a 148a c esp 145d 148a / *Republic* BK II 320d 3 4c BK X 427c-434c / *Sophist* 561b-d 577d 579d
9 ARISTOTLE *Poetics* CH 8 [1451 16] CH 9 [1451b39] 685d 686c CH 15 [1454a23 b9] 689b-c CH 17 [1455a21-35] 690c CH 24 [1460 2 b2] 696b c CH 25 [1460b6-1461 8] 696d 697c [1461 31 b25] 697d 698c
14 PLUTARCH *Theseus* 1a b / *Coriolanus* 189b c
21 DANTE *Divine Comedy* HELL, XV [124 136] 23d XXIV [79] XXV [151] 35b 38a XXVIII 41b 43 XXXII [1 12] 47c PARADISE X [28 48] 120c d XXXIII [49-75] 156d 157a
22 CHAUCER *Troilus and Cressida* BK II STANZA 147 49 40b-41a / *Prologue to Melibeus* 400b 401a
23 HOBBES *Leviathan* PART I 67b
25 MONTAIGNE *Essays* 41b c
29 CERVANTES *Don Quixote* PART I 183d 193a esp 184a d 186b d PART II 208d 209d 212 215b esp 213b-c 237b c
30 BACON *Advancement of Learning* 38c 39b
31 DESCARTES *Discourse* PART I 4 a b
37 FIELDING *Tom Jones* 19a 20a 49b 50c 152a 155b
40 GIBBON *Decline and Fall* 186c d 345c 471c d
44 BOSWELL *Johnson* 446c 447a
46 HEGEL *Philosophy of History* INTRO 153a b
47 GOETHE *Faust* PART II [74 8 7433] 181b-182a
48 MELVILLE *Moby Dick* 150 152a
51 TOLSTOY *War and Peace* K 134a c

8 The nature and causes of dreaming

7 PLATO *Republic* BK X 416a-c / *Timaeus* 454d / *Theaetetus* 520 521b
8 ARISTOTLE *Dreams* 702a 706d
12 LUCRETIUS *Nature of Things* BK IV [722-8 2] 53d 55a [962 036] 56d 57c
14 PLUTARCH *Marcus Brutus* 817b-c
18 AUGUSTINE *Confessions* BK X par 41 42 81c 82a
19 AQUINAS *Summa Theologica* PART I Q 17 2 RE 102a d Q 84 A 8 R 2 450b 451b
22 CHAUCER *Troilus and Cressida* BK V STANZA 36-37 125a STANZA 52-55 127a b STANZA 183 144a STANZ 245 152a / *Nun's Priest's Tale* [14 889- 5 162] 451a 455b
23 HOBBES *Leviathan* PART I 50d 51d PART IV 258b-c
25 MONTAIGNE *Essays* 290b-c 533d 534
26 SHAKESPEARE *Romeo and Juliet* ACT I SC V [49-103] 291a-c / *Midsummer Night's Dream* ACT II SC I [145 56] 360b-c ACT IV SC I [9 3] 369d 370b
27 SHAKESPEARE *Hamlet* ACT II SC II [260-266] 43b
31 DESCARTES *Discourse* PART IV 51c 53c 54b / *Meditations* I 75d 76a VI 103a d / *Objections and Replies* 143a c 209c
32 MILTON *Paradise Lost* BK V [95 128] 177b-178a
35 LOCKE *Human Understanding* BK II CH XIX SECT I 175c
40 GIBBON *Decline and Fall* 295b
42 KANT *Judgement* 560b
44 BOSWELL *Johnson* 443c
46 HEGEL *Philosophy of History* PART I 220c 221a
48 MELVILLE *Moby Dick* 94a 95b
51 TOLSTOY *War and Peace* EPILOGUE I 672b
53 JAMES *Psychology* 387b 388a 534a 535a 643b [fn 1]
54 FREUD *Origin and Development of Psycho Analysis* 11a 13a / *Interpretation of Dreams* 135a 387a c esp 137a 139b 168d 174d 231b-232b 234b 236b 252c 253a 262c 278a 294d 295b 336d 340 346d 347b 350 b 356a 360d 363b 377c / *General Introduction* 476a 544d esp 478b 482c 495d 497a 532d 535d 618b c / *Beyond the Pleasure Principle* 641 d 649d 650b / *New Introductory Lectures* 807b d 818b esp 812d 813c 817a 818b 820c 822b

8a Dreams as divinely inspired their prophetic portent divination through the medium of dreams

OLD TESTAMENT *Genesis* 20 3-7 28 10-22 31 10-13 24 37 11 40-41 / *Numbers* 12 6 / *Deuteronomy* 13 1-5 / *Judges* 7 13 15 / *I Samuel* 8 6 15—(D) *I Kings* 28 6 5 / *I Kings* 3 5-15—(D) *III Kings* 3 5 5 / *II Chronicles* 1 7- 2—(D) *II Paralipomenon* 1 7-12 / *Job* 4 13 1 7 13- 5 33 14-16 / *Ecclesiastes* 5 7—(D) *Ecclesiastes* 5 6 / *Jeremiah* 23 25 32 29 8-9—(D) *Jeremias* 23.25-32 29 8-9 / *Daniel* 2 4 4-37 7-8 10-12—(D) *Daniel* 2 4 , 8 10 12 / *Joel* 2 28 29
APOCRYPHA *Rest of Esther* 10-11—(D) OT *Esther* 10 4 11 2 / *Wisdom of Solomon* 17 18 3 19 esp 18 7 19—(D) OT *Book of Wisdom* 17 18 13- 9 esp 18 7 19 / *Ecclesiasticus* 34 -7—(D) OT *Ecclesiasticus* 34 1 7 / *II Maccabees* 15 11 6—(D) OT *II Machabees* 15 11 16
NEW TESTAMENT *Matthew* 1.20-2 2 2 3 19-3 7 19 / *Acts* 2 7 8 18 9-10
4 HOMER *Iliad* BK I [59-67] 3d BK II [-75] 10a d / *Odyssey* BK XIX [5 9-581] 294c 295
5 AESCHYLUS *Persians* [76- 3] 17a d / *Prometheus Bound* [44 -5 6] 44c-45a esp [484 486] 45a [645-657] 46d 47a / *Choephoroe* [5 3-552] 7 b-c
5 SOPHOCLES *Oedipus the King* [9 6-986] 108b

(8. The nature and causes of dreaming 8a. Dreams as divinely inspired: their prophetic portent; divination through the medium of dreams)

5 Euripides: *Iphigenia Among the Tauri* [42-66] 411c-d; [1234-1283] 42b-c
6 Herodotus: *History*, bk i, 8a; 10a; 25b; 31a; 47a-c; bk ii, 78d-79; bk iii, 95d; 103b-104b; 116a-b; bk iv, 154c-d; bk v, 170c-d; bk vi, 205d-206a; 208b; 211a; bk vii, 218b-220b
7 Plato: *Crito*, 213b-d / *Timaeus*, 466d-467c
8 Aristotle: *Prophesying*, 707a-709a,c
13 Virgil: *Aeneid*, bk iii [147-179] 151a-152a; bk viii [26-93] 259b-261b
14 Plutarch: *Themistocles*, 98d-99a / *Alcibiades*, 174a-d / *Coriolanus*, 185b-186a / *Pelopidas*, 239d-240c / *Aristides*, 268a-d / *Pyrrhus*, 329c-d / *Cimon*, 398d-399b / *Lucullus*, 411a-b / *Eumenes*, 473a-b / *Agesilaus*, 483a-b / *Pompey*, 514d-515a; 532b; 534d-535a / *Alexander*, 548d-549a / *Caesar*, 601d-604d / *Demosthenes*, 702c-703b / *Cicero*, 721c-722a / *Demetrius*, 727b-d / *Marcus Brutus*, 816d-817c
15 Tacitus: *Annals*, bk ii, 26c; bk xi, 101b; bk xii, 112d-113a; bk xvi, 176b-d
18 Augustine: *Confessions*, bk iii, par 19-20 18b-19a
19 Aquinas: *Summa Theologica*, part i, q 12, a 11, ans 59d-60d; q 86, a 4, rep 2 463d-464d
20 Aquinas: *Summa Theologica*, part iii, q 7, a 8, rep 1 750d-751d
21 Dante: *Divine Comedy*, hell, xxvii [124]-xxxiii [90] 49a-50c; purgatory, ix [1-69] 65d-66c; xix [1-69] 81c-82a
22 Chaucer: *Troilus and Cressida*, bk v, stanza 53 127a; stanza 177-183 143b-144b; stanza 207-217 147a-148b; stanza 245 152a / *Nun's Priest's Tale* [14,976-15,162] 452b-455b
23 Hobbes: *Leviathan*, part ii, 165d-166a; 173c; 175c; 176d-177b; 184a-185a passim; 186c-d
24 Rabelais: *Gargantua and Pantagruel*, bk iii, 150d-156c
25 Montaigne: *Essays*, 533d-534a
26 Shakespeare: *Julius Caesar*, act ii, sc ii [75-94] 578d-579
27 Shakespeare: *Cymbeline*, act v, sc iv [30-151] 481c-482c; sc v [426-465] 488b-d
30 Bacon: *Advancement of Learning*, 54c-55a
32 Milton: *Paradise Lost*, bk viii [283-499] 238b-243a / *Areopagitica*, 389b
40 Gibbon: *Decline and Fall*, 294d-296b
46 Hegel: *Philosophy of History*, part i, 244c-245a; part ii, 263d-265c
53 James: *Psychology*, 643b [fn 1]
54 Freud: *Origin and Development of Psycho-Analysis*, 11c / *Interpretation of Dreams*, 137b-138d; 145d-146a; 178b-179; esp 179d [fn 2]; 383d-384a; 387a-c / *General Introduction*, 477b-d

8b. The role of sensation and memory in the dreams of sleep

6 Herodotus: *History*, bk vii, 219b
8 Aristotle: *Dreams*, 702a-706d
12 Lucretius: *Nature of Things*, bk iv [722-822] 53d-55a; [962-1036] 56d-57c
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For The discussion of memory and imagination in relation to the faculties of sense and under standing desire and will *see* DESIRE 5a IDEA 1c 2e-2f SENSE 3b(-) 3d(2)

The controversy over the distinction between image and idea *see* IDEA 2f-2 MIND 1a(1) SENSE 1d 5a UNIVERSAL AND PARTICULAR 4d

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The consideration of memory as knowledge of the past *see* KNOWLEDGE 6b(2) TIME 6e TRUTH 3a(2) and for the distinction between memory and intellectual habit *se* HABIT 1 5d MIND 4c

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The role of memory in science history and poetry *see* EXPERIENCE 2a-2b HISTORY 1 INDUCTION 2 POETRY 2

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The theory of the transcendental unity of apperception to which memory or imagination contributes *see* KNOWLEDGE 6b(4) ONE AND MANY 4b SENSE 1c 3c(5)

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Matters relevant to the psychopathology of memory and imagination *see* DESIRE 5a–5b EMOTION 3a–3b MAN 5b MIND 8b SENSE 4d(2) TRUTH 3a(2)

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World* but relevant to the idea and topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collection
II Works by authors not represented in this collection

For the date place and other facts concerning the publication of the works cited consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*

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Chapter 57 METAPHYSICS

INTRODUCTION

IN this chapter as in MATHEMATICS we must distinguish controversies about the science we are considering from controversies in it But here the situation is complicated by many ambiguities In the tradition of western thought the name of science has never been denied to mathematics no matter how its subject matter has been defined or what conception of science has prevailed But controversies about metaphysics often begin in modern times at least by questioning our right to use the word science when we speak of metaphysical inquiry or speculation The challenge usually implies that metaphysics cannot be regarded as a body of valid knowledge because the peculiar objects it has chosen to investigate are not susceptible to scientific inquiry

If experimentation were the *sine qua non* of scientific knowledge it would follow of course that a discipline which could not perform experiments or even less rigorous types of empirical research could not be called a science But by that standard mathematics would also be ruled out It does not seem to be the case however that mathematics and metaphysics stand or fall together

Hume for example admits the one and excludes the other If we are persuaded of his principles concerning science what havoc he says must we make when we run over our libraries If we take in our hand any volume of divinity or school metaphysics for instance let us ask *Does it contain any abstract reasoning concerning quantity or number?* No *Does it contain any experimental reasoning concerning matter of fact and existence?* No Commit it then to the flames for it can contain nothing but sophistry and illusion

Nor does Kant make experimentation or empirical research indispensable to valid and certain knowledge On the contrary pure as opposed to empirical physics is for him like mathematics in having the superior status of *a priori* knowledge They are both sciences in the highest sense of the term because they consist of valid synthetic judgments *a priori* Kant therefore does not exclude metaphysics from the ranks of science because he thinks that metaphysic according to its proper aim consists merely of synthetic propositions *a priori* Not the method of metaphysics nor the form of its propositions but the character of its objects seems to be the cause of its frustration, reducing it to what Kant calls an illusory dialectic rather than a valid science

It might be supposed that those who take the opposite view—that metaphysics *is* a science even perhaps the highest of the sciences—would agree in defining its objects or the scope of its inquiry This does not seem to be the case any more than it seems to be true that all those who criticize metaphysics conceive its subject matter in the same way

Following what he takes to be the traditional conception of metaphysics in the mediaeval schools which appears to him to be continued in the writings of Descartes Leibnitz and Wolff Kant says that metaphysic has for the proper object of its inquiries only three grand ideas God Freedom and Immortality This also seems to be at least part of what Hume has in mind when he refers to school metaphysics and associates it with divinity by which he means theology natural or sacred Yet we find William James saying that Hume is at bottom as much of a metaphysician as Thomas Aquinas because he is engaged in speculations concerning the relation or lack of relation the identity or lack of identity in the discrete elements of immediate experience Here the quest on seems to be not about God freedom and immortality but about the existence of enduring

substances underlying all perceptible qualities or about a fixed order of reality behind the sequence of phenomena in experience According to James the whole question of interaction and influence between things is a metaphysical question and cannot be discussed at all by those who are unwilling to go into matters thoroughly

In the Preface to his *Principles of Psychology* James declares his plan to limit his own inquiries to what can be known by the empirical methods of the natural sciences Psychology like physics must assume certain data The discussion of these assumptions he says is called metaphysics and falls outside the province of this book The data assumed by psychology just like those assumed by physics and the other natural sciences must sometime be overhauled The effort to overhaul them clearly and thoroughly is metaphysics but metaphysics can only perform her task well when distinctly conscious of its great extent The implication seems to be not that metaphysics is impossible but rather that metaphysics as James conceives it does not yet exist in any mature or satisfactory development Only a metaphysics alive to the weight of her task he writes can hope to be successful That will perhaps be centuries hence

WE CANNOT FULLY explore the issue concerning the objects of metaphysics without observing that other names are used in the tradition of the great books to designate the discipline which rightly or wrongly claims to be the highest human science The Greeks initiated the conception of a discipline which should be preeminent because it deals with first principles and highest causes It not only searches for wisdom about the ultimate realities it also lays the foundations for all other sciences But the Greeks do not have one name for this discipline nor is metaphysics even among the various names they use

Aristotle whose *Metaphysics* is the first great book to have this word in its title never uses the word to refer to the science which he is trying to define and establish In the opening chapters he speaks of it under the name of wisdom for all men suppose what is called Wisdom to deal with the first causes and the principles of all things There are other theoretical sciences such as physics and mathematics which investigate causes or deal with principles but they do not reach to the highest causes or first principles nor do they take all things in their most universal aspect as the object of their inquiry

Though physics also is a kind of Wisdom says Aristotle it is not the first kind and elsewhere he says that both physics and mathematics must be classed as *parts* of Wisdom Physics deals only with material things in motion and the mathematician investigates abstractions —objects which except as abstracted cannot exist apart from matter and motion If there is something which is eternal and immovable and separated from matter clearly the knowledge of it belongs to a theoretical science —not however to physics nor to mathematics but to a science prior to both It is that science which is the highest part of wisdom

Aristotle gives two names to the supreme form of human wisdom or the highest of the theoretical sciences He denominates it both from the position it occupies in relation to all other disciplines and also in terms of the kind of substance which it alone investigates If there is no substance other than those which are formed by nature natural science (*i e* physics) will be the first science but if there is an immovable substance the science of this must be prior and must be first philosophy But this highest science also deserves to be called theology as well as first philosophy There are Aristotle says three theoretical philosophies mathematics physics and what we may call theology since it is obvious that if the divine is present anywhere it is present in things of this sort *i e* the eternal immutable immaterial

THERE IS STILL another name for the highest speculative discipline in the Greek conception of the order of the sciences Dialectic is the name which Plato gives to the search for first principles and for the knowledge of the most intelligible realities As appears in the chapter on DIALECTIC Aristotle contrasts the dialectician and the philosopher as respectively concerned with opinion and knowledge but Plato regards the dialectician as preeminently the

philosopher Not only does dialectic belong to the realm of knowledge rather than opinion but in the realm of knowledge mathematics occupies the lower dialectic the upper part The mathematical sciences build upon hypotheses which they do not and cannot establish Dialectic uses hypotheses only as steps and points of departure into a world which is above hypotheses in order that she may soar beyond them to the first principle of the whole and by successive steps she descends again without the aid of any sensible object from ideas through ideas and in ideas she ends

Despite all the relevant differences between Plato and Aristotle concerning being and becoming reason and sense the intelligible and the sensible it seems possible to compare the knowledge which Plato calls dialectic with what Aristotle calls first philosophy or theology

Both for example proceed from first principles and establish the foundations of the inferior sciences On its downward path dialectic according to Plato brings the light of reason to bear on the understanding of the hypotheses which are the principles of mathematics Though Aristotle thinks that mathematics rests on axioms or self evident truths he also says that it must be the business of first philosophy to examine the principles of mathematics because the mathematician only uses them in a special application without investigating their general truth Furthermore the question concerning how the objects of mathematics exist is a question for the first philosopher not the mathematician

In the *Sophist* Plato to illustrate the difference between the sophist and the dialectician or philosopher develops an analysis of such terms as being and non being true and false same and other one and many rest and motion These it seems are the fundamental concepts in the philosopher s knowledge of the ultimate reality But these are also the fundamental concepts in Aristotle s *Metaphysics* In the mediaeval period when metaphysics generally replaces dialectic as the name for the first philosophy the so-called transcendental terms—such as *being essence other one true good*—are treated as the basic metaphysical concepts and what is characteristic of them as abstractions helps to characterize the nature of metaphysics as a science

The word metaphysics comes into use as a result of the title supposedly given by the Alexandrian librarians to the work in which Aristotle treats the problems of the first philosophy The word is short for the books which come after the books on physics Plotinus uses the word and connects it with the Platonic meaning of dialectic In the training of the metaphysician he says dialectic is the ultimate study

Dialectic according to Plotinus is the method or discipline that brings with it the power of pronouncing with final truth upon the nature and relation of things—what each is how it differs from others what common quality all have to what kind each belongs and in what rank each stands in its kind and whether its bein is real being and how many beings there are and how many non beings to be distinguished from beings But we must not think of dialectic Plotinus declares as the mere tool of the metaphysician It goes beyond metaphysics as vision or contemplative wisdom goes beyond discursive reasoning and demonstration It leaves to another science all that coil of premises and conclusions called the art of reasoning

The question which Plotinus raises—whether there is a higher science or form of knowledge than metaphysics—is naturally considered by the great Christian theologians In part their answer resembles that of Plotinus in part it differs Where Plotinus speaks of dialectic as the most precious part of philosophy because it transcends reasoning and argument and reaches the sort of immediate apprehension of reality which cannot be expressed in words theologians recognize the supremacy of mystical knowledge—a foretaste in this life of what the vision of God will be like in the life to come But unlike Plotinus they do not think such knowledge here or hereafter is natural wisdom Rather it is supernatural knowledge the divine gift to man of a contemplative wisdom to which his nature cannot attain by its own unaided powers

The subordination of metaphysical science to knowledge which is both supernatural and non-scientific (*i e* neither discursive nor analytical nor demonstrative) is considered in the chap-

ters on THEOLOGY and WISDOM Another subordination of metaphysics considered there also must be mentioned here as well That is the subordination of metaphysics to theology Both metaphysics and theology may be conceived as sciences which are engaged in reasoning and argument and in trying to demonstrate conclusions from principles But one is merely a human science working with the principles of reason whereas the other is what Aquinas calls sacred doctrine in order to signify that its principles are articles of religious faith

In the hierarchy of human sciences metaphysics remains supreme—the first philosophy It suffers only by comparison with theology insofar as the latter rests upon divine revelation and since it enjoys the certainty of faith escapes the insecurity of reason Though metaphysics and theology differ in their principles and somewhat in their methods they do not differ entirely in their subject matter Both for example may treat of God and of the existence of immaterial and imperishable beings Aquinas therefore must face the objection that there is no need for any knowledge in addition to metaphysics because everything that is is treated of in *philosophical science—even God* Himself in that part of philosophy called theology or the divine science by Aristotle To this he replies by giving two reasons for sacred theology

It is necessary he says for the salvation of man that certain truths which exceed human reason should be made known to him by divine revelation Even as regards those truths about God which human reason could have discovered it was necessary that man should be taught by a divine revelation because the truth about God such as reason could discover would only be known by a few and that after a long time and with the admixture of many errors Furthermore he continues there is no reason why those things which may be learnt from philosophical science so far as they can be known by natural reason may not also be taught us by another science so far as they fall within revelation Hence the theology included in sacred doctrine differs in kind from that theology which is a part of philosophy

These two kinds of theology are traditionally distinguished as natural and sacred When Francis Bacon divides the sciences into theology and *philosophy* he adds that *in the former* we do not include natural theology Natural theology is the divine part of philosophy yet it is clearly distinct from sacred theology or what Bacon calls inspired divinity

This distinction in whatever language it is made raises two problems The first concerns the relation of natural to sacred theology especially with regard to the scope of natural theology and the precise nature of its independence of sacred doctrine On this question there seems to be considerable difference between such writers as Augustine and Aquinas or Bacon and Descartes As already noted the various issues involved are reserved for discussion in the chapter on THEOLOGY The second problem is directly pertinent to metaphysics alone The question is whether metaphysics and natural theology are identical in subject matter or scope or whether natural theology is only a part of metaphysics

Aristotle seems to answer this question when he suggests that first philosophy and theology are interchangeable designations for the highest branch of speculative knowledge To *the extent that he declares this science to be an* inquiry concerning the existence and nature of immaterial and imperishable substances his definition of the object of metaphysics would seem to justify the title of theology

Descartes who also separates metaphysics from physics by reference to the immateriality and materiality of the substances which are their objects even more explicitly seems to give the whole of metaphysics a theological character In the Preface to his *Meditations on the First Philosophy* he says that he is concerned to treat of God and the human soul for as he explains to the professors of Sacred Theology of the Sorbonne I have always considered that the two questions respecting God and the soul were the chief of those that ought to be demonstrated by philosophical rather than theological argument

Though he adds the freedom of the human will to the existence of God and the immortality of the soul Kant s definition of the objects of metaphysical speculation similarly makes metaphysics an inquiry into things which lie outside the realm of physics and associates it

with the traditional subject matter of theology at least in the sense that here reason tries to prove propositions which are the main tenets of religious faith In his Preface to the first edition of the *Critique of Pure Reason* Kant remarks that when reason finds itself compelled to have recourse to principles which transcend the region of experience it falls into confusion and contradictions The arena of these endless contests is called Metaphysic

IF NOTHING IMMATERIAL exists if there are no beings apart from the changing things of sense experience or if although such things exist they cannot be known by reason proceeding in the manner of speculative science does it follow that metaphysics must also be denied existence at least as a speculative science? The answer seems to be clear If the declared objects of a science do not exist or if those objects are unknowable by the methods which that science proposes to follow then it seems difficult to defend its claims to be a valid science against those who challenge them The controversy over the validity of metaphysics would thus appear to turn on the truth or falsity of the two ifs just mentioned

But the matter cannot be so resolved if natural theology does not exhaust the whole of metaphysics that is if metaphysics considers objects other than the immaterial and if it inquires into their nature rather than their existence Aristotle s definition of the subject matter of the first philosophy seems to contain an alternative conception of metaphysics one which may be quite consistent with the conception of it as theology but which however gives it problems to solve in the realm of physical things

There is a science Aristotle writes which investigates being as being and the attributes which belong to being in virtue of its own nature This definition of the first philosophy seems to differentiate it from mathematics and physics as sharply as the other definition in terms of immaterial and imperishable substances The other sciences according to Aristotle do not treat of being *qua* being universally The properties of anything which is in so far as it has being and the contraries in it *qua* being it is the business of no other science to investigate for to physics one would assign the study of things not *qua* being but rather *qua* sharing in movement and mathematics is concerned with the attributes of things *insofar as they are quantitative and continuous* These sciences mark off some particular kind of being some genus and inquire into this but not being simply nor *qua* being Similarly these sciences omit the question whether the genus with which they deal exists or does not exist *because it belongs to the same kind of thinking to show what it is* and that it is

Only the first philosophy does not inquire about particular subjects in so far as each has some attribute or other but speculates about being *in so far as each particular thing is* Its subject matter then includes *all* existing things as existing and involves not only the question how anything which exists exists (i e the properties of being) but also the question whether certain things whose existence can be questioned do in fact exist Whatever truths hold good for all things *qua* being—such as the principle that the same thing cannot both be and not be in the same respect at the same time —belong to the first philosophy even though as in this case Aristotle points out the law of contradiction may also belong to logic as the principle of demonstration

THIS BROADER CONCEPTION of the first philosophy explains as its restriction to natural theology could not explain why the central books in Aristotle s *Metaphysics* treat of sensible physical substances their nature as substances the distinction between substance and accident form and matter potentiality and actuality as principles of the composite nature of changing substances and the properties of such existences in virtue of their having being e g their unity and divisibility their sameness and otherness

Aristotle does not inquire whether such substances exist He seems to take their existence as unquestionable for he frequently refers to physical things as the readily recognized substances But in addition to the question how sensible substances exist there are such questions as whether there are or are not any besides sensible substances and whether there

s a substance capable of separate existence from sensible substances and if so why and how These latter questions lead to the concluding books of the *Metaphysics* which inquire into the existence of the non sensible the immaterial the immutable If Aristotle s theology begins here then theology is only a part—the crowning part perhaps—of a larger science whose object is not a special realm of being but all of being

Hobbes and Bacon go further than Aristotle in the direction of opposing the identification of metaphysics with theology Where Aristotle seems to admit theological subject matter as a part of the first philosophy they exclude it entirely

Hobbes does not use the word metaphysics in his own classification of the sciences he employs it only as a term of derogation to refer to scholastic doctrines which he repudiates. His own classification makes *philosophia prima* that branch of natural philosophy which is prior to the mathematical and mechanical sciences The latter deal with determinate quantity and motion. The antecedent science deals with quantity and motion *indeterminate* These being the principles or first foundation of philosophy the science which deals with them is called *Philosophia Prima*

Bacon distinguishes between first philosophy and metaphysics and between metaphysics and natural theology First philosophy he says is the common parent of sciences It is concerned with axioms not peculiar to any science but common to a number of them and also with the adventitious or transcendental condition of things such as little much like different possible impossible entity nonentity etc Natural theology which is the divine part of philosophy because it inquires about God unity goodness angels and spirits is separate from the rest of natural philosophy

But to assign the proper office of metaphysics, as contra-distinguished from primary philosophy and natural theology Bacon writes we must note that as physics regard the things which are wholly immersed in matter and movable so metaphysics regards what is more abstracted and fixed that physics supposes only existence motion and natural necessity whilst metaphysics supposes also mind and idea As we have divided natural philosophy into the investigation of causes and the production of effects and referred the investigation of causes to theory which we again divide into physical and metaphysical it is necessary that the real difference of these two be drawn from the nature of the causes they inquire into Physics according to Bacon inquires into efficient and material causes metaphysics into formal and final causes and as mechanics is the practical application of physical theory so what Bacon calls magic is the practical doctrine that corresponds to the metaphysical theory of forms

AGREEMENT OR disagreement concerning the subject matter and problems of that which claims to be the highest human science however named does not seem to be uniformly accompanied by agreement or disagreement concerning the status and development of the discipline in question

There seems to be some similarity for example between Plato s dialectic as an inquiry into forms and Bacon s notion of metaphysics as concerned with formal causes—a similarity which Bacon himself observes But where Plato seems to think that dialectic exists to be taught and learned Bacon s judgment is that this part of metaphysics if not the part dealing with final causes has not yet been developed because the right method has not been employed

Again Aristotle s conception of metaphysics as concerned with the primary axioms the universal principles applicable to all existence and the transcendental properties of being seems to bear some resemblance to Bacon s primary philosophy But Bacon writes as if Aristotle s *Metaphysics* had not been written or at least as if it had not succeeded as Aristotle might have supposed it had in establishing the science which Bacon finds for the most part in a defective or undeveloped condition

If we turn to natural theology either as a part of metaphysics (with Aristotle) or as separate from metaphysics (with Bacon) or as identical with metaphysics (with Descartes) we find the same situation Aside from some verbal and some real differences concerning the objects of the inquiry Aristotle Bacon and Descartes think that the existence of beings

apart from the sensible world of matter and change can be demonstrated and that some thing can be known of their nature—whether they are called immaterial substances spirits and intelligences or God angels and souls

With some alterations in language and thought Plato and Plotinus Augustine and Aquinas Spinoza and Locke can be added to this company They are theologians in that sense of theology which implies a rational knowl edge—without religious faith and either by in tuition or demonstration—of beings which re ally exist yet are not sensible or material or mutable or finite Spinoza for example does not use the word metaphysics but he holds that the human mind possesses an adequate knowledge of the eternal and infinite essence of God Although Locke s use of the word meta physics is derogatory and though the pur pose of his *Essay Concerning Human Understand ing* is to prevent human inquiries from extend ing beyond man s capacities he attributes greater certainty to our knowledge of God and the soul than to our knowledge of bodies, and finds no greater difficulty in our speculations about spirits than about particles of matter

Experimenting and discovering in ourselves knowledge and the power of voluntary mo tion as certainly as we experiment or discover in things without us the cohesion and separa tion of solid parts which is the extension and motion of bodies Locke writes we have as much reason to be satisfied with our notion of immaterial spirit as with our notion of body and the existence of the one as well as the other

But whichever of these complex ideas be clearest that of body or immaterial spirit this is evident that the simple ideas that make them up are no other than what we have received from sensation or refl ction and so is it of all our other ideas of substances even of God himself

As we have already seen Hume and Kant deny metaphysics (so far as it is identified with what is trad tionally natural theology) the status of a val d theoretical science For them it is incapable of taking its place beside physics and mathematics Hume in add tion denies validity to metaphysical speculation concern ing causes and substances in the natural order Unlike Hume who simply removes metaphysi cal problems from the realm of questions worth thinking about Kant does not reject the problems but rather offers alternative methods of stating and solving them He hopes thereby to accomplish a reformation rather than an ab olition of metaphysical inquiry

The existence of God freedom and im mortality must be affirmed Kant thinks, in the order of practical not speculative reason They are indispensable conditions of the nec essary object of our will that is to say con ditions of the practical use of pure reason Yet he adds we cannot affirm that we *know* and *understand* I will not say the actuality but even the possibility of them

Furthermore by redefining metaphysics to mean any system of knowledge *a priori* that consists of pure conceptions Kant not only gives his fundamental treatises in morals and ethics a metaphysical character but sees the possibility of a genuine metaphysic emerging from the *Critique of Pure Reason* Once the dogmatism of metaphysic has been removed that is the presumption that it is possible to achieve anything in metaphysic without a pre vious criticism of pure reason it may not be too difficult to leave a bequest to posterity in the shape of a systematical metaphysic carried out according to the critique of pure reason

Kant s transcendental philosophy and es pecially what he calls the architectonic of pure reason is in a sense that metaphysic al ready begun In subject matter if not in its method or conclusions it resembles the tradi tional inquiry concerning the universal prin ciples and transcendental properties of being The objects of natural theology are of course excluded as being beyond the power of reason to know in a speculative manner

Metaphysics as a possible science is for Kant nothing more than the inventory of all that is given us by *pure reason* systematically ar ranged Such a system of pure speculative reason he says in his original preface to the *Critique* I hope to be able to publish under the title of *Metaphysic of Nature* And in the last pages of the *Critique* wherein he criticizes all speculative efforts in the sphere of natural theology Kant reaffirms the speculative and the practical use of pure reason to constitute a Metaphysic of Nature and a Metaphysic of

thics The former he says is what is commonly called Metaphysic in the more limited sense Both together form properly that department of knowledge which may be termed in the truest sense of the word philosophy The path which it pursues is that of science

when it has once been discovered is lost and never misleads

CONTROVERSIES ABOUT metaphysics can be distinguished from metaphysical controversies— that is disputes within the field of metaphysical thought We have confined our attention to the former throughout this chapter But it may not be possible to judge much less to resolve the issues about the scope methods and validity of metaphysics without engaging in or at least facing issues which are themselves metaphysical

The only way to escape this would be to suppose that psychology (as an analysis of the powers of the mind) or epistemology (as a theory of the criteria of valid knowledge) could determine in advance of any examination of metaphysical discussion whether the matters to be discussed fall within the range of questions concerning which the human mind has the power to find and validate answers But if this supposition is untenable in itself or if it is untenable because psychology and epistemology when they are treated as the first philosophy themselves presuppose a metaphysics or conceal their metaphysical presuppositions then no alternative remains but to judge metaphysics directly by its fruits

In that case the issues surveyed in this chapter require an examination of the metaphysical discussions to be found in such chapters as GOD ANGEL IDEA SOUL IMMORTALITY WILL (which are relevant particularly to the problems of natural theology) and (as relevant to other parts or problems of metaphysics) such chapters as BEING CAUSE FORM MATTER ONE AND MANY RELATION SAME AND OTHER

OUTLINE OF TOPICS

REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page **12**.

PAGE SECTIONS: When the text is printed in one column, the letters a and b refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a–119b**, the passage begins in the upper half of page **116** and ends in the lower half of page **119**. When the text is printed in two columns, the letters a and b refer to the upper and lower halves of the left-hand side of the page, the letters c and d to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b–164c**, the passage begins in the lower half of the left-hand side of page **163** and ends in the upper half of the right-hand side of page **164**.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; e.g., *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (D), follows; e.g., OLD TESTAMENT: *Nehemiah*, 7:45—(D) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. Conceptions of the highest human science: dialectic, first philosophy, metaphysics, natural theology, transcendental philosophy

7 PLATO: *Charmides*, **7d–13d** / *Symposium*, **167a–d** / *Republic*, BK VI–V, **383d–398c** / *Timaeus*, **476a–b** / *Parmenides*, **486a–511d** esp **491a–d** / *Sophist*, **561d–574c** esp **571a–c** / *Statesman*, **585c** / *Philebus*, **611d–612b**, **633a–635a** esp **634b–635a** / *Seventh Letter*, **809c–810d**

8 ARISTOTLE: *Physics*, BK I, CH 9 [192ᵃ33–ᵇ2] **268c–d**; BK II, CH 2 [194ᵇ9–15] **271a–c**; CH 7 [198ᵃ22–31] **275b–c** / *Heavens*, BK I, CH I [298ᵇ13–24] **390a–b** / *Metaphysics*, BK I, CH I–2 **499a–501c**; BK II, CH I **511b–d**; **512b**; BK III, CH I [995ᵃ23–ᵇ7] **513b–d**; **514b**; CH 2 [996ᵃ18–997ᵃ34] **514d–516a**; BK IV, CH I–3 **522a–525a**; BK VI, CH I **547b–d**; **548c**; BK XI, CH I–4 **587a–590a**; CH 7 **592b–593a** / *Soul*, BK I, CH I [403ᵇ10–17] **632d**

9 ARISTOTLE: *Ethics*, BK VI, CH 7 **390a–d**

11 NICOMACHUS: *Arithmetic*, BK I, **811a–813a**

16 PTOLEMY: *Almagest*, BK I, **5a–b**

17 PLOTINUS: *First Ennead*, TR III **10a–12b**

18 AUGUSTINE: *City of God*, BK VIII, CH I–12 **264b–d**, **273a**

19 AQUINAS: *Summa Theologica*, PART I, Q I, A I **3b–4a**; A 8, ANS **7c–8d**

20 AQUINAS: *Summa Theologica*, PART I–II, Q 57, A 2 **36a–37b**; PART II–II, Q 45, A I, ANS **598d–599d**

23 HOBBES: *Leviathan*, PART I, **72a–d**; PART IV, **269b–272b**

30 BACON: *Advancement of Learning*, **15d**, **40a–48d** esp **40a–41b**, **43a–c**, **44c–45a** / *Novum Organum*, BK II, APH 9 **140b–c**

31 DESCARTES: *Discourse*, PART IV **51b–54b**

31 SPINOZA: *Ethics*, PART II, PROP 40, SCHOL 2 **388a–b**; PROP 47, SCHOL **390c–391a**; PART V, PROP 25–42 **458d–463d**

35 HUME: *Human Understanding*, SECT I **451a–455b** passim

42 KANT: *Pure Reason*, **1a–13d**, **19**, **115d–117d**, **120b** [fn 1], **172d–174**, **243c–250a** esp **246a–248d** / *Fund. Prin. Metaphysic of Morals*, **253b–d**, **264b–d** esp **264d** / *Pref. Metaphysical Elements of Ethics*, **365a–366a** / *Intro. Metaphysic of Morals*, **387a–388d** esp **388a**, **390b–d**, **391a** / *Judgement*, **551a–552c**, **603d–607c** esp **606d–607c**

46 HEGEL: *Philosophy of History*, INTRO **165a–b**

51 TOLSTOY: *War and Peace*, BK V, **197b**

53 JAMES: *Psychology*, xiiib–xiva, **95**

54 FREUD: *New Introductory Lectures*, **874a**

2 The analysis of the highest human sc ence the ch racter of dialectical metaphysi cal or transcendental knowledge

2 The distincti e objects or problems of the supreme science

2b Th nature of the concepts bstract ons o pr nciples of the h ghe t sc ence

2c The method of metaphys cs the distinction between empir cal and transcendental methods

42 KANT *Pure Reason* 36d 37d / *Fund Prin Metaphysic of Morals* 253b-c
46 HEGEL *Philosophy of History* INTRO 165a b 182d 183c
53 JAMES *Psychology* 671a 672a 852a 873a 874a 881b 886a esp 881b 882a 884b 886a 890a

4 The criticism and reformation of metaphysics

4a. The dismissal or satirization of metaphysics as dogmatism or sophistry

23 HOBBES *Leviathan* PART I 49d 52a b 54b-c 56b d 57c d 59a 60a 71a b 80b 84a PART II 163a b PART III 183c d PART IV 247d 267a 272b 274a b 276c
25 MONTAIGNE *Essays* 240a 246a 257d 264a
30 BACON *Advancement of Learning* 40a-c 57d 58b 60a-c / *Novum Organum* BK I APH 62-65 113b 114c APH 7 117a c
35 LOCKE *Human Understanding* BK III CH X SECT 2 291d 292a SECT 6-14 293a 295a BK IV CH VIII SECT 9 347d 348a
35 BERKELEY *Human Knowledge* INTRO SECT 6 405d 406a SECT 17 409d 410a SECT 97 431d 432a SECT 143 441c d
35 HUME *Human Understanding* SECT I DIV 6-7 453b 454a passim SECT VIII DIV 62 478c SECT XI DIV 132 509d
36 STERNE *Tristram Shandy* 329b 336a 421b 422b
39 SMITH *Wealth of Nations* BK V 335b 336c
41 GIBBON *Decline and Fall* 526c 527a
42 KANT *Pure Reason* 1a 4a c 20b-c 36 37d 109b-c 120c 121c 129c 130a 133d 157d 187c 188b 192a b 218d 222b esp 221c 222b 229b c / *Practical Reason* 299d 304d 305a 335b-c / *Judgement* 600d 601c 607d 608c
47 GOETHE *Faust* PART I [1948 1963] 46a b [4343 4367] 107a b PART II [7843 7846] 191a
48 MELVILLE *Moby Dick* 115b-117a 255a
51 TOLSTOY *War and Peace* BK VI 243b
53 JAMES *Psychology* XIVa 90a 227b 235b 702a b

4b Reconstructions of metaphysics critical philosophy as a propaedeutic to metaphysics

23 HOBBES *Leviathan* PART IV 269b-c
31 DESCARTES *Discourse* PART II 46c-48b PART IV 51b 54b / *Meditations* 72b d 75a 77c / *Objections and Replies* 237b 238b passim 267a 277a c passim
35 BERKELEY *Human Knowledge* INTRO 405a 412a c passim esp SECT 21 23 411b-412a c SECT 133 439c-440a
35 HUME *Human Understanding* SECT I DIV 7 10 453c-455b SECT XII DIV 116 503d 504a
42 KANT *Pure Reason* 1a 13d 15c 16d 19a 22a c 101d 102b 133c 134d 146a 149d 157d 196b 197c 218d 227a 248d 250 c / *Fund Prin Metaphysic of Moral* 270c d 273d 274a / *Practical Reason* 292d 293b 296a d 307a d 331a 332d / *Judgement* 567c 568a

CROSS REFERENCES

For Statements in other contexts concerning the highest human science *see* DIALECTIC 2a 4 PHILOSOPHY 2b SCIENCE 1a(2) THEOLOGY 3a WISDOM 1a

Discussions relevant to the objects problems and concepts of metaphysics or the highest human science *see* BEING 2 3 4-4a 7a-7b 7c 7d 7e 8a-8b CAUSE 5a 5d GOD 2b-2c 6b GOOD AND EVIL 1a-1b IDEA 1f IMMORTALITY 2 KNOWLEDGE 6a(1) 6a(4) LIBERTY 4a MIND 10f NECESSITY AND CONTINGENCY 1 2a-2b ONE AND MANY 1-1b RELATION 3 SAME AND OTHER 1 2c 2e SOUL 4b TRUTH 1b-1c

Considerations relevant to the nature of metaphysical concepts or abstractions *see* BEING 1 DEFINITION 6a IDEA 1d 2g 4b(4) MEMORY AND IMAGINATION 6d SIGN AND SYMBOL 3d

The method or character of metaphysical thought *see* KNOWLEDGE 6c(4) LOGIC 4d PHILOSOPHY 3a-3b REASONING 6a TRUTH 4c

The relation of metaphysics to theology *see* KNOWLEDGE 6c(5) THEOLOGY 2 3a 4a WISDOM 1a 1c and for the relation of metaphysics to mathematics and physics *see* MATHEMATICS 1a NATURE 4b PHILOSOPHY 2b PHYSICS 1a SCIENCE 1a(2)

The problem of principles common to metaphysics and logic *see* PRINCIPLE 1c and for the statement of the law of contradiction *see* OPPOSITION 2a

Criticisms of metaphysics and for the substitution of psychology or epistemology for metaphysics as the first philosophy *see* DIALECTIC 2c 3c 6 KNOWLEDGE 5d-5e MAN 2b(4) PHILOSOPHY 3d 6b SOUL 5a THEOLOGY 5

Considerations relevant to a metaphysic of morals and for the solution therein of the problems of God freedom and immortality *see* GOD 2d IMMORTALITY 3a NECESSITY AND CONTINGENCY 4b PHILOSOPHY 2a WILL 5b(4)

ADDITIONAL READINGS

Listed belo are works not included in *G eat Books of the Western World* but relevant to the idea and topics with which this chapter deals These works are d vided into two groups

I Works by authors represented in this collection
II Wo ks by authors not represented in this collection

For the date place and other facts concerning the publication of the works cited consult the Bibliography of Additional Readings which follows the last chapter of *The G eat Ideas*

I

AQUINAS *On th T n ty of Bo thius* QQ 5-6
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KANT *D Mund Sen b l (Inaugu al D ssertat on)* SECT V
—— *P olegomena to Any Futu e M taphysic* par 1-5 40-60 SCHOLIA
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HEGEL *Science of Log c* VOL I BK I
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II

MAIMONIDES *The G id fo the Perpl x d* PART I C I 33-36
BONAVENTURA *It ne a um Mentis n Deum (The It nerary of the Mind to G d)*
SUÁREZ *D sputation s Metaphy cae* e p s
MALEBRANCHE *D al gu on M taphys cs and Re l g n*
LEIBNITZ *Ph l ph al Wo k* CH II *(On the Ref rm of Metaphysics and on the Notion of Substance)*
VOLTAIRE Metaphysics in *A Ph l ph cal Dic tionary*
SCHOPENHAUER *The Wo ld as W ill and Id* VOL II SUP CH 17
COMTE *The Positi e Philos phy* INTRO
LOTZE *Metaphy cs* INTRO
C S PEIRCE *Collected Papers* VOL VI par 318 394
A E TAYLOR *Elements of Metaphys s*
BERGSON *The C eat ve M nd* CH 6
SANTAYANA *Dialogs n Limbo* CH 10
HEIDEGGER *Wa i t Metaphysik?*
WHITEHEAD *P oc ss and Reality* PART I C I 3 (2) P RT II CH 9 (4)
T WHITTAKER *P ol gom na to a N w Met physic*
MARITAIN *Th Degr e of Knowl dge* INTRO CH 4
—— *A P face to Metaph s* I LECT II-III
CARNA *Th Unity of Science*
—— *Ph losophy and Log cal Syntax* I
GILSON *Th Un ty of Ph lo ophical Experi ce* CH 12
B RUSSELL *Mysticism and L g c* CH 5
—— *An Inqu ry into Mean ng and Truth* CH 25

Chapter 58 MIND

INTRODUCTION

In the tradition of the great books the word mind is used less frequently than reason intellect understanding or soul There are still other words like intelligence consciousness and even spirit or psyche which often carry some part of the connotation of the word mind Certain authors use mind as a synonym for one or another of these words and give it the meaning which other writers express exclusively in terms of reason or understanding Some discuss mind without reference to soul some identify mind with soul or spirit and some conceive mind as only a part of soul or spirit

For the purpose of assembling in a single chapter references to all discussions which fall within the area of meaning common to all these terms it was necessary to adopt some single covering word Our choice of mind is partly the result of its present currency partly the result of the fact that it is somewhat more neutral than the others and therefore less prejudicial to the conflicting theories which are juxtaposed in this chapter

Words like reason or intellect usually imply a sharper distinction between the functions or faculties of sensation and thought than does the word mind Imagination and memory for example are attributed to the understanding in the writings of Locke and Hume whereas in the analytical vocabulary of Aristotle and Aquinas imagination and memory belong to sense not to reason or intellect Similarly words like soul or spirit usually connote a substantial as well as an immaterial mode of being whereas mind can have the meaning of a faculty or a power to be found in living organisms

The adoption of the word mind is purely a matter of convenience It begs no questions and decides no issues The relations between what is here discussed and the matters considered in the chapters on SOUL, SENSE MEMORY AND IMAGINATION remain the same as they would be if reason or intellect were used in place of mind Different formulations of these relationships are not affected by the words used but by different theories of what the mind is however it is named

Before we consider the diverse conceptions of the human mind which are enumerated under the seven main divisions of the first section in the Outline of Topics it may be useful to examine the elements of meaning more or less common to the connotation of all the words which mind here represents Even here we must avoid begging the question whether mind is a peculiarly human possession Other animals may have minds Mind may be as it is on one theory a universal property of matter According to another theory there may be superhuman minds or intelligences or a single absolute mind a transcendent intelligence

What then does the universe contain because there is mind in it which would be lacking if everything else could remain the same with mind removed? The facts we are compelled to mention in answering this question should give us some indication of the elements of meaning common to mind and all its synonyms

FIRST IS THE FACT of thought or thinking If there were no evidence of thought in the world mind would have little or no meaning The recognition of this fact throughout the tradition accounts for the development of diverse theories of mind None of the great writers denies the phenomenon of thought however differently each may describe or explain it none therefore is without some conception of mind

It may be supposed that such words as thought or thinking cannot because of their own ambiguity help us to define the sphere of mind But whatever the relation of thinking to sensing thinking seems to involve more—for almost all observers—than a mere reception of impressions from without This seems to be the opinion of those who make thinking a consequence of sensing as well as of those who regard thought as independent of sense For both thinking goes beyond sensing either as an elaboration of the materials of sense or as an apprehension of objects which are totally beyond the reach of the senses To the extent that this insight is true the elements or aspects of thought discussed in the chapters on IDEA JUDGMENT and REASONING have an obvious relevance to the various theories of mind discussed in this chapter

THE SECOND FACT which seems to be a root common to all conceptions of mind is that of knowledge or knowing This may be questioned on the ground that if there were sensation without any form of thought judgment or reasoning there would be at least a rudimentary form of knowledge—some degree of consciousness or awareness by one thing of another Granting the point of this objection it nevertheless seems to be true that the distinction between truth and falsity and the difference between knowledge error and ignorance or knowledge belief and opinion do not apply to sensations in the total absence of thought The chapter on KNOWLEDGE reports formulations of these distinctions or differences Any understanding of knowledge which involves them seems to imply mind for the same reason that it implies thought

There is a further implication of mind in the fact of self knowledge Sensing may be awareness of an object and to this extent it may be a kind of knowing but it has never been observed that the senses can sense or be aware of themselves Take for example definitions of sense or theories of sensation and the objects of sense Such definitions and theories must be regarded as works of reflective thought they are not products of sensation

Thought seems to be not only reflective but reflexive that is able to consider itself to define the nature of thinking and to develop theories of mind This fact about thought—its reflexivity—also seems to be a common element in all the meanings of mind It is sometimes referred to as the reflexivity of the intellect or as the reflexive power of the understanding or as the ability of the understanding to reflect upon its own acts or as self consciousness Whatever the phrasing a world without self consciousness or self knowledge would be a world in which the traditional conception of mind would probably not have arisen

THE THIRD FACT is the fact of purpose or intention of planning a course of action with foreknowledge of its goal or working in any other way toward a desired and foreseen objective As in the case of sensitivity the phenomena of desire do not without further qualification indicate the realm of mind According to the theory of natural desire for example the natural tendencies of even inanimate and insensitive things are expressions of desire But it is not in that sense of desire that the fact of purpose or intention is here taken as evidence of mind

It is rather on the level of the behavior of living things that purpose seems to require a factor over and above the senses limited as they are to present appearances It cannot be found in the passions which have the same limitation as the senses for unless they are checked they tend toward immediate emotional discharge That factor called for by the direction of conduct to future ends is either an element common to all meanings of mind or is at least an element associated with mind

It is sometimes called the faculty of will—rational desire or the intellectual appetite Sometimes it is treated as the act of willing which along with thinking is one of the two major activities of mind or understanding and sometimes purposiveness is regarded as the very essense of mentality Considerations relevant to this aspect of mind are discussed in the chapter on WILL.

THESE THREE OR FOUR FACTS—thought knowledge or self knowledge and purpose—seem to be common to all theories of mind More than that they seem to be facts which require the

development of the conception They are for the most part not questioned in the tradition of the great books but they are not always seen in the same light They are not always related in the same way to one another and to other relevant considerations From such differences in interpretation and analysis arise the various conflicting conceptions of the human mind

The conflict of theories concerning what the human mind is what *structure* it has what *parts* belong to it or what *whole* it belongs to does not comprise the entire range of controversy on the subject Yet enough is common to all theories of mind to permit certain other questions to be formulated

How does the human mind operate? How does it do whatever is its work and with what intrinsic excellences or defects? What is the relation of mind to matter to bodily organs *to material* conditions? Is mind a common possession of men and animals or is whatever might be called mind in animals distinctly different from the *human mind? Are there minds* or a mind in existence apart from man and the whole world of corporeal life?

Such questions constitute the major topics of this chapter Other topics which appear here such as the moral and political aspects of mind are reserved for discussion in the many other chapters devoted to the great ideas of moral and political thought Still others like the problem of insanity—the loss or derangement of mind—are obviously relevant here even though the more *general consideration of psy*chopathology belongs elsewhere *e g* in the chapter on MEDICINE

The intelligibility of the positions taken in the dispute of the issues which are here our ma*jor concern depends* to some degree on the divergent conceptions of the human mind from which they stem It seems necessary therefore to examine the *seven notions of mind* which appear in the great books This will at least provide the general context for the reader s further explorations even if it is not possible to trace the implications each of these notions may have for the *great controversial* issues

Seven is of course a fiction of analysis There are from one point of view more—perhaps as many as there are among the great authors thinkers who have dwelt at length on the subject From another point of view there may be fewer than seven for when the lines are drawn according to certain basic differences several of these theories appear to be variants of a single doctrine

THAT IN THE SOUL which is called mind Aristotle writes is that whereby the soul *thinks and judges For him as for Plato the* human intellect or reason is a part or power of the soul of man distinct from other parts or faculties such as the senses and the imagination desire and the passions Though the human soul is distinguished from the souls of other living things by virtue of its having this part or power and is therefore called by Aristotle a rational soul these writers do not identify mind and soul As soul is the principle of life and all vital activities so mind is the subordinate principle of *knowledge and the activities of think*ing deliberating deciding

Within the general framework of this theory *many differences exist between Plato and Aris*totle and between them and others who share their views These differences arise not only with respect to the soul of which the intellect is a part but also with respect to the power or activity of the intellect itself For example the distinction which Aristotle initiates between mind as an active and as a passive power is more explicitly *formulated by Aquinas in his* theory of the active intellect and the intellect as potential

The human intellect Aquinas writes *is in* potentiality to things intelligible and is at first *like a clean tablet on which nothing is written* as the Philosopher says This is made clear from the fact that at first we are only in potentiality towards understanding and afterwards we are made to understand actually And so it is evident that with us to understand is *in a way to be passive* But the forms of things or what Aquinas calls their intelligible species are not actually intelligible as they exist in material things He therefore argues that in addition to the power receptive of such species which is called the *possible intellect* by reason of its being in potentiality to such species there must also be another intellectual power which he calls the active or agent intellect

Nothing he says can be reduced from potentiality to act except by something in act or already actual We must therefore assign on the part of the intellect some power to make things actually intelligible by the abstraction of the species from material conditions Such is the necessity for positing an agent intellect

The more explicit formulation which Aquinas gives of the distinction between the active and the possible intellects as distinct powers has further consequences for the analysis of three states of the passive or possible intellect distinguished by Aristotle The intellectual power which is receptive of the intelligible species may either be in complete potentiality to them as it is when it has not yet come to understand certain things Or it may be described as in habitual possession of the intelligible species when it has previously acquired the understanding of certain things but is not now actually engaged in understanding them In the third place the potential intellect may also be actual or in act whenever it is actually exercising its habit of understanding or is for the first time actually understanding something

In this traditional theory of mind many other distinctions are made in the sphere of mental activity but none is thought to require a division of the mind into two distinct powers or even to require the discrimination of several states of the same power Just as Plato regards the intuition or direct apprehension of intelligible objects as an activity of the same intelligence which is able to reason discursively about the ideas it can contemplate so Aristotle and Aquinas assign three different activities to the intellectual power which apprehends intelligible objects not by intuition but only as the result of the abstraction of forms from matter by the active intellect

Once the possible intellect is actualized by the reception of the abstracted species it can act in three ways It can express in concepts the species which have been impressed upon it This—the first act of the *intellect—is conception* Its second and third acts—of judgment and of reasoning—consist in forming propositions out of concepts and in seeing how one proposition follows from others in inference or proof

Unlike abstraction and conception which *Aquinas assigns to the active and the possible* intellect respectively conception judgment and reasoning do not in his opinion require distinct powers Nor do the two kinds of thought or reasoning which Aquinas calls speculative and practical Th speculative and practical intellects he maintains are not distinct powers for they differ only in their ends. The speculative intelle t directs what it apprehends not to operation but to the sole consideration of truth the practical intellect directs what it apprehends to *operation or* action But to the nature of intellect as a power of apprehension it is accidental whether it be directed to operation or not

Not all the *foregoing* distinctions are made or made in the same way by Plato Aristotle and other authors like Plotinus Augustine or Aquinas who stand together in regardin mind as only a part of the human soul Lucretius belongs with them on this point though he differs radically from them on the issue *of mind and* matter Mind *for him* is only *the directing* principle *of the soul* the head so to speak and reigns paramount in the whole body It is only the thinking or deciding part of the soul. But Plato Aristotle and their followers make a distinction in kind between sensations or images and universal ideas or abstract concepts Sense and intellect are for them distinct faculties of knowing and have distinct objects of knowledge For Lucretius on the other hand thinking is merely a reworking of the images received by the senses In this one respect at least Lucretius is more closely associated with the theory of mind to be found in Hobbes, Lo ke and Hume

In the consideration of mind agreement on one point seems everywhere to be accompanied by disagreement on another Locke does not agree with Lucretius or Hobbes about the materiality of mind and though he agrees with Berkeley that mind is a spiritual entity *he does not agree with him any more than he agrees* with Hobbes and Hume about the abstraction of general concepts from particular sense impressions Plato and Aristotle agree that the senses and the intellect or reason are quite distinct but they do not agree about the relation of these faculties especially not on the extent

to which the mind can act independently of sense and imagination Augustine seems to share Plato s doctrine of reminiscence as an account of how the senses recall actively to mind ideas it has always somehow possessed Aquinas adopts Aristotle s doctrine of abstraction as the quite contrary account of the role the senses play in providing the materials on which the mind works to obtain ideas But Augustine and Aquinas come together on another point in which they depart alike from Aristotle and Plato *They distinguish with precision between* the intellect and will as separate faculties of the soul whereas Plato and Aristotle treat thinking and willing (or knowing and loving) as merely diverse aspects of mental life

The same situation *prevails with respect to* the other theories of mind which we must now consider in their own terms Descartes for ex ample *resembles Plato and Augustine on* the point on which we have seen that they together differ from Aristotle and Aquinas namely the *relation of mind or reason to the senses or imag ination* Yet he is also closer to Aristotle and Plato in a respect in which they together differ from Augustine and Aquinas namely in re garding thinking and willing as acts of the mind rather than as belonging to completely sepa rate faculties

These agreements and differences occur in the context of a basic opposition between Des cartes and all the other writers so far men tioned Unlike all of them he *identifies* the human mind with the rational soul of man In the dual nature of man he says there are cer tain activities which we call corporeal *e g* magnitude figure motion and all those that cannot be thought of apart from extension in space and the substance in which they exist is called *body* Further there are other activi ties which we call *think ng* activities *e g* un derstanding willing imagining feel ng etc which a ree in falling under the description of thought percept on or consciousness The sub stance in which they reside we call a *think ng thing* or *the mind* or any other name we care provided only we do not confound it with cor poreal substance since thinking activities have no affinity with corporeal activities and thought which is the common nature in which the former agree is totally *different from* ex tension the common term for describing the latter Descartes denies that brutes possess thought but even though I were to grant he says that thought existed in them it would in nowise follow that the human mind was not to be distinguished from the body but on the contrary that in other animals also there was a mind distinct from their body

The two components of human nature are according to Descartes each of them substances —*a res cog tans or a thinking substance and a res extensa* or an extended substance Descartes uses the phrases rational soul and mind inter changeably Reason or intellect—the capacity to think—is not a power of the soul Nor is thinking an act which the soul sometimes per forms sometimes does not It is the very es sence of the soul itself even as extension is the essence of body Just as bodies cannot exist *without actually having three dimensions* so the mind cannot exist without thinking

Though it is literally translated into English by *I think therefore I am* Descartes *cogito ergo sum* can be rendered by Thinking is therefore the mind is or by the strictly equivalent statement The mind exists therefore there is thinking It is precisely this equation of the m nd s existence with the activity of thought which Locke challenges

We know certainly by experience he writes that we sometimes think and thence draw this infallible consequence that there is some thing in us that has the power to think but whether that substance perpetually thinks or not we can be no farther assured than ex perience informs us I grant that the soul in a waking man is never without thought be cause it is the condition of being awake but whether sleeping without dream ng be not an affection of the whole man mind as well as body may be worth a waking man s considera tion Methinks every drowsy nod shakes their doctrine who teach that the soul is always thinking

What is striking about this disagreement is that Locke and Descartes agree in the r con ception of man as a union of two distinct sub stances—the un on of a material substance or body with a spi itual substance a mind or soul It is not surprising however that B rkeley

should hold the Cartesian view ag inst Locke Considering the flow of time in terms of the *succession of ideas Berkeley affirms it to be* a plain consequence that the soul always thinks To try to abstract the *existence* of a spirit from its cogitation is he adds modestly no easy task He might have said it is impossible for *since he holds that bodies do not exist and that* man consists of mind or spirit alone he need not hesitate to assert that the mind cannot cease to think without ceasing to be Neither he nor Descartes is in James opinion free to *take the appearances for what they seem to be* and to admit that the mind as well as the body may go to sleep

Despite these differences Descartes Locke and Berkeley seem to agree on the range of ac *tivities within the sphere of mind The mind is* a thinking substance for Descartes yet it also senses and imagines suffers passions and exer cises acts of will What Descartes says in terms of acts Locke says in terms of powers Mind *has many distinct powers* among which Locke includes all the cognitive faculties (not only the powers of abstract thought and reasoning but also those of sense and imagination) and such voluntary faculties as choosing and willing Berkeley also includes the whole range of psy chological phenomena—sensation imagination *memory the passions reasoning and* choice

Hume takes a similar view though in his case one basic qualification must be added He does not conceive the mind as a soul or a spirit or any other sort of substance He even has *some difficulty with the notion of its continuity* or identity from moment to moment in the flow of experience Yet he says it cannot be doubted that the mind is endowed with several powers and faculties that these powers are dis tinct from each other There are many ob vious distinctions of this kind such as those *between will and understanding* the imagina tion and the passions which fall within the comprehension of every human creature What the mind is or how it exists we may not be able to say but Hume thinks that if we can go *no farther than this mental geography or de* lineation of the distinct parts and powers of the mind it is at least a satisfaction to go so far

Descartes theory of mind seems to serve as a point of departure in another direction from that taken by Locke Spinoza agrees that the mind is a thinking thing He agrees that man *consists of an individual* body united with an individual mind But he differs from Descartes on the meaning of substance By its very na ture substance is infinite and because it is in finite there can be only one substance which *is God Finite individual things wh ther bod* ies or minds do not exist as substances but as modes of the divine attributes

The human mind is a part of the infinite intellect of God and therefore Spinoza de *clares when we say that the human mind per* ceives this or that thing we say nothing less than that God has this or that idea *He in* cludes love and desire as well as perception and imagination among the affections of the mind *even calling them modes* of thought He adds however that these do not exist apart from the idea of the thing *loved* or *desired*, though the idea may exist although no other mode of thinking exist

Of the remaining three of the seven concep tions of mind here being considered *two bear* certain resemblances to theories already men tioned

Hegel s view of the human mind as a phase or dialectical moment of the Absolute Mind or *Spirit* seems comparable to *Spinoza s concep* tion of the human mind as a part of God s in finite intellect The Hegelian theory of mind developed in such works as the *Phenomenology of Mind* and the *Philosophy of Mind* is re flected in his *Philosophy of History* and in his *Philosophy of Right* The expression of his view of mind appears therefore in the chapters on History and State as well as here

There seems to be similar justification for associating the views of William James with those of Locke and Hume Willing to posit a soul influenced in some mysterious way by the brain states and responding to them by conscious affections of its own James goes on to say that the bare phenomenon however the immediately known thing which on the *mental side is in apposition* with the entire brain process is the state of consciousness and not the soul itself

What the soul is and whether it exists belong to metaphysics So far as psychological obser

vation and analysis are concerned the phenomena of mind are to be found in the stream of thought or consciousness States of mind are states of consciousness James uses the words feeling or thought to cover every type of mental operation every state of mind every form of consciousness including sensations and emotions desires and wishes as well as conception and reasoning

Locke and Hume distinguish powers of the mind according to different types of mental operation James tends rather to analyze the mind in terms of its diverse states according to different types of mental content But he also lays great stress on the dynamic interconnection of the various elements of consciousness in the continuous flow of the stream of thought

Freud too presents an analysis of different types of mental content and accompanies it by a theory of the different layers of mind—or psychic structure He holds for example that we have two kinds of unconscious—that which is latent but capable of becoming conscious and that which is repressed and not capable of becoming conscious in the ordinary way That which is latent and only unconscious in the descriptive and not in the dynamic sense we call *preconscious* the term unconscious we reserve for the dynamically unconscious repressed so that we have three terms conscious (Cs) preconscious (Pcs) and unconscious (Ucs)

Like James Freud is concerned with the dynamic interaction of various mental operations or contents In addition a further point of similarity exists between them James says that the pursuance of future ends and the choice of means for their attainment are the mark and criterion of the presence of mentality No actions but such as are done for an end and show a choice of means can be called indubitable expressions of Mind Freud goes further in the same direction By identifying psychic energy in general with what he calls libido he implies that mind in its most primitive form has entirely the aspect of desire or seeking It expresses itself in two fundamentally different kinds of instincts the sexual instincts in the widest sense of the word and the aggressive instincts whose aim is destruction

FINALLY THERE is the theory in which mind is neither one of the faculties of the soul nor itself a thinking substance nor is it a soul or spirit with a diversity of powers All our knowledge Kant writes begins with sense proceeds thence to understanding and ends with reason beyond which nothing higher can be discovered in the human mind for elaborating the matter of intuition and subjecting it to the highest unity of thought These three faculties have distinct functions for Kant The sensitive faculty is a faculty of intuition The faculty of understanding is a faculty of judgment and scientific knowledge The faculty of reason when properly employed performs a critical and regulative function in the realm of thought but when employed beyond the province of its power leads thought into blind alleys or dialectical frustrations

Mind is not one of these faculties nor is it the being in which these faculties inhere The notion of mind seems to have significance for Kant primarily in a collective sense It represents the unity and order of the triad of cognitive faculties The faculties of feeling and will—which Kant adds to these in his enumeration of the higher faculties —belong to the transcendental ego but they do not fall within that part of the transcendental structure which is mind Kant s distinction between the speculative and the practical use of reason and his distinction between the moral and the aesthetic judgment involve different relationships between mind—or its triad of faculties—and these other faculties

THE FOREGOING SURVEY of conceptions of the human mind gives some indication of the way in which other questions about mind are answered

With regard to the relation of mind and matter for example the theories of Descartes Spinoza Locke and James seem to affirm a duality of substances or of modes of substance or at least of realms—the physical and the mental They are confronted by the problem of the relation which obtains between the two —their independence or interaction

"Mental and physical events writes James are on all hands admitted to present the strongest contrast in the entire field of being

The chasm which yawns between them is less easily bridged over by the mind than any interval we know Why then not call it an absolute chasm he asks and say not only that the two worlds are different but that they are independent?

James thinks that to urge this theory of the complete independence of mind and body is *an unwarrantable impertinence in the present state of psychology* He prefers the common sense theory that each acts on the other somehow But earlier writers who consider body and mind as distinct substances find grave difficulties in the way of conceiving their interaction How our minds move or stop our bodies by thought which we every moment find they do is according to Locke obscure and inconceivable According to Hume there is no principle in all nature more mysterious than the union of soul with body He interprets one consequence of the union to be that a supposed spiritual substance acquires such an influence over a material one that the most refined thought is able to actuate the grossest matter Were we empowered by a secret wish to remove mountains or control planets in their orbit this extensive authority Hume thinks would not be more extraordinary nor more beyond our comprehension

Denying that bodies exist Berkeley nevertheless argues that even if they did they could exert no influence upon mind Though we give the materialists their external bodies he says they by their own confession are never the nearer knowing how our ideas are produced since they own themselves unable to comprehend in what manner body can act upon spirit or how it is possible that it should imprint any idea in the mind Hence it is evident that the production of ideas or sensations in our minds can be no reason why we should suppose matter or corporeal substances since that is acknowledged to remain equally inexplicable with or without this supposition

Those who deny the existence of matter like Berkeley or the existence of anything immaterial like Lucretius or Hobbes are confronted by problems of their own Berkeley must explain the mind s perception of bodies or why the mind thinks of matter Lucretius must explain perception thought and choice as function of material particles in motion.

The reduction of mind to matter raises a question which leads in the opposite direction. Why may it not be supposed that thought and feeling are present in the universe wherever matter is—an atom of mind inseparably conjoined with every atom of matter as in the mind stuff or mind dust theory which William James considers and criticizes? Still another formulation of the relation of mind to matter is found in the theory of Aristotle and Aquinas according to whom the rational soul is the substantial form of an organic body but the intellect—one of its powers—is not united to matter in any way Mind is said to be immaterial in that understanding or thought does not require a bodily organ

The angelic intellect according to Aquinas is a cognitive power which is neither the act of a corporeal organ nor in any way connected with corporeal matter The human mind is not so completely divorced from matter for though man s intellect is not the act of an organ yet it is a power of the soul which is the form of the body Among all bodily forms the human soul alone has the distinction of possessing an operation and a power in which corporeal matter has no share whatever But Aquinas also maintains that the body is necessary for the action of the intellect not as its organ of action but on the part of the object —the phantasm or image produced by the sensitive faculty He conceives this dependence in the following manner For the intellect to understand actually there is need for the act of the imagination and of the other powers that are acts of bodily organs When the act of the imagination is hindred by a lesion of the corporeal organ for instance in a case of frenzy or when the act of the memory is hindered as in the case of lethargy we see that a man is hindered from understanding actually even those things of which he had a previous knowledge

The problem of body and mind is discussed more fully in the chapter on MATTER Other problems involved in the theory of mind similarly occur in other chapters as well as in this one e g the problem of mind in animals and men (in the chapters on ANIMAL and MAN) the problem of the existence of minds superior to that of man (in the chapters on ANGEL and

GOD) the problem of the origin of ideas in the human mind (in the chapters on IDEA and MEMORY AND IMAGINATION) It should be noted however that agreement or disagreement on the nature of the human mind does not always determine agreement or disagreement with respect to these other questions

Sharing the view that the mind is a spiritual substance Locke and Descartes do not agree about innate ideas or principles Locke tends to agree with Aristotle when he says that the mind is a *tabula rasa* void of all characters without any ideas How comes it to be furnished? he asks Whence has it all the *materials* of reason and knowledge? To this I answer in one word from *Experience* In that all our knowledge is founded and from that it ultimately derives itself Our observation employed either about external sensible objects or about the internal operations of our own minds is that which supplies our understandings with all the *materials* of thinking

But Locke does not accept Aristotle s sharp distinction between the faculties of sense and reason nor does he find it necessary to adopt Aristotle s notion of an active intellect to explain how the mind abstracts general ideas from the particulars of sense perception So far as his theory attributes to mind the power of sense Locke has more affinity with Berkeley and Hume than with Aristotle yet on the question of abstract ideas or the distinction between men and brutes he is as much opposed to them as they are to Aristotle

These few observations may be taken as a sample of the many intricately crossing lines of thought which make the complex pattern of the traditional discussion of mind With few exceptions almost any other choice of authors and topics would provide similar examples That fact combined with the fact that almost every major topic in this chapter leads into the discussion of other great ideas tends to make the chapter on MIND a kind of focal point for perspective on the whole world of thought It is not surprising that this should be the case for on any theory mind is somehow the place of ideas or as Aristotle says the form of forms

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in **4** Homer *Iliad* BK II [265 83] **12d** the number **4** is the number of the volume in the set the number **12d** indicates that the passage is in section d of page 12

Page Sections When the text is printed in one column the letters a and b refer to the upper and lower halves of the page For example in **53** James *Psychology* **116a 119b** the passage begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the page For example in **7** Plato *Symposium* **163b 164c** the passage begins in the lower half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

Author s Divisions One or more of the main divisions of a work (such as PART BK CH SECT) are sometimes included in the reference line numbers in brackets are given in certain cases e g *Iliad* BK II [265 283] **12d**

Bible References The references are to book chapter and verse When the King James and Douay versions differ in title of books or in the numbering of chapters or verse the King James version is cited first and the Douay indicated by a (*D*) follows e g Old Testament *Nehemiah* 7 45—(*D*) *II Esdras* 7 46

Symbols The abbreviation esp calls the reader s attention to one or more especially relevant parts of a whole reference passim signifies that the topic is discussed intermittently rather than continuously in the work or passage cited

For additional information concerning the style of the references see the Explanation of Reference Style for general guidance in the use of *The Great Ideas* consult the Preface

1 Diverse conceptions of the human mind

1a Mind as intellect or reason a part or power of the soul or human nature distinct from sense and imagination

7 Plato *Republic* BK IV **350a 353d** BK VI **386d 388a** BK VII **392c 393c** BK IX **421a-c** / *Timaeus* **466a-467a** / *Theaetetus* **534d 535c**

8 Aristotle *Physics* BK VII CH 3 [247^b 248 9] **330b-d** / *Soul* BK II CH 2 [413^b24 26] **643d 644a** CH 3 [414^b14 20] **644d** [414^b33 415 13] **645a b** BK III CH 3-8 **659c 664d**

9 Aristotle *Ethics* BK I CH 7 [1097^b34-1098^a7] **343b** BK IX CH 4 [1166 10-28] **419b-c** CH 8 [1168^b28 1169 12] **422b d** CH 9 [1170 16-18] **423d-424a** BK X CH 7 [1177^b26-1178 8] **432c** / *Politics* BK VII CH 15 [1334^b8 28] **539b d**

12 Lucretius *Nature of Things* BK III [136-160] **31d 32a**

12 Epictetus *Discourses* BK I CH 6 **111a b**

17 Plotinus *First Ennead* TR I CH 7 **3d 4a** / *Fifth Ennead* TR III CH 2 3 **216b 217b**

18 Augustine *Confessions* BK X par 11 36 **74a 80d** esp par 21 **76c d** BK XII par 12 **113b d** / *City of God* BK VII CH 23 **256b c** BK VIII CH 6 **269b-c** BK XI CH 27 **337d 338a** BK XIX CH 18 **523a b** / *Christian Doctrine* BK II CH 8 **626c 627a**

19 Aquinas *Summa Theologica* PART I Q A 3 ANS **380c 381b** Q 6 A 3 CONTRARY **391a 393a** Q 78 A 1 ANS **407b 409a** Q 79 **413d-427a**

21 Dante *Divine Comedy* PURGATORY XXV [61-84] **92a b**

42 Kant *Pure Reason* **113b 115c** esp **113c 114b 248d 250a c** / *Judgement* **551a 552**

1a(1) The difference between the acts of sensing and understanding and the objects of sense and reason

7 Plato *Phaedo* **224a 225a 228a 230c 231 232a** / *Republic* BK VI VII **383d 398c** / *Timaeus* **447b d 457b-458a** / *Theaetetus* **534d 536b** / *Sophist* **565a 569a** esp **568a** / *Philebus* **634b 635b**

8 Aristotle *Posterior Analytics* BK I CH **111b-c** CH 31 **120a-c** BK II CH 19 **136a** / *Topics* BK II CH 8 [114 8 26] **159d 160a** / *Physics* BK I CH 5 [188^b 6-189] **264b-c** VII CH 3 [247^b1 248^a9] **330b d** / *Metaphysics* BK I CH 1 [980^a28-981^b13] **499a 500a** CH 5 [986^b25-987^a1] **504d 505a** CH 6 [987^a] **505b d** BK III CH 4 [999 24 5] **518a b** VII CH 10 [1035^b35 1036^a12] **559b c**

563c 564c BK VIII CH ~ [1043 12 28] 567c d H 3 [1043^b28 33] 568b BK X CH 9 586a c BK XI CH 7 [1064 4-9] 592b / *Soul* BK II CH 5 [417^b17 28] 648b c BK III CH 8 664b d

12 LU ETIUS *Nature of Th gs* BK IV [353-521] 48d 51a esp [469-521] 50b 51a [722 756] 53d 54

12 EPICT TUS *Di courses* BK I CH 6 110c 111c

17 PLOTINU *First Enn ad* TR I CH 7 3d-4a / *Third Ennead* TR VI CH 2 107b c / *Fo th En ead* TR III C I 23 153d 154b TR VI CH I 189b-190b TR VII CH 8 195b 196a / *F fth E ead* TR III CH 2 216b c

18 AUGUSTINE *Conf ss ns* BK III par 10 15b d K IV par 15 17 23a-c K VII pa 23 50b c / *City of G d* BK V I CH 6 269b c BK XIX CH 18 523a b

19 AQUINAS *Summa Th olog ca* PART I Q 12 A 3 AN 52c 53b Q 13 A I R P 3 62c 63c Q 14 A 11 84c 85 Q 18 A 2 ANS 105c 106b A 3 ANS 106b 107c Q 55 A 2 REP 289d 290d Q 57 A I R P 2 295a d A 2 ANS and R I 295d 297a Q 75 A 3 REP 2 380c 381b A 5 ANS 382 383b Q 76 A 2 REP 4 388c 391a Q 79 A 5 R P 2 418c 419b A 6 R P 2 419b-420d Q 84 A I ANS and RE 2 440d 442 A ANS and R P I 442b 443 AA 6-8 447 451b Q 85 A I REP 3 451c 453c A 2 453d 455b Q 86 A I 461c-462a P RT I II Q A R P 3 610b-611b Q 2 A 6 ANS 619d 620d Q 29 A 6 748b 749a

20 AQU NAS *Summa Th logica* P T II Q 50 A 3 REP 3 8b 9a ART III SU L Q O A 2 REP 3 896 897d

1 (2) The coope tion of intellect nd sense th dep ndence of thought upon imag i t on and the direction of magina t on by e on

7 PL O *Pha dru* 126b c / *Ph d* 228a 230c / *R publ c* BK II 333b d K VI II 383d 398 / *Th tet* 535a 536b / *Seventh L tter* 809 810d

8 AR S TLE *Pos tor A alyt cs* BK I H 18 111b K H 19 136a 137a c / *Phys* BK V I CH 3 [246^b20-248 8] 330 d / *Soul* BK I CH [403 2 10] 632 BK III CH 7 [43 14] CH 8 [432 3] 663d 664d / *Sen e nd th Sens bl* H 6 [445 4 8] 683b d / *Memory d Rem cen* CH I [449^b30-450^a25] 690 691a

18 A U T N *City of God* BK X X CH 8 523 b

19 AQUI *Summa The l g ca* ART I Q 55 A 3 EP 2 380 381b Q 79 A 4 RE 3 417a 418 Q 8 A 3 ANS d R 2 3 430 431d Q 84 2 CO T RY nd R I 442b-443 A 3 A S 443d-444d A 4 ANS 444d 446b AA 6-8 447c 451b Q 85 A 451c-453c A 5 R P 2 457d-458d A 7 ANS 459 -460b Q 86 A I A S and R 2 461 462a A 4 REP 3 463d 464d Q 88 AA 2 469a-472 Q 89 A I AN and REP I 473b-475a A 5 ANS and REP 4 477a-478b Q 91 A 3 REP 1-3 486b 487d

20 AQUINAS *Summa Theologica* PART I II Q 50 A 3 REP 3 8b 9a A 4 REP I 3 9a 10b Q 51 A I ANS 12b 13c Q 52 A I ANS 15d 18a Q 56 A 5 ANS 33c 34b PART III Q II A 2 773a d

1a(3) The functioning of intellect the acts of underst nd ng judgment and re soning

7 PLATO *Phaedo* 228a 230c / *Republic* BK VII 392a 394a / *Theaetetus* 535a 536b 537d 538a

8 A I TOTLE *Categories* CH 4 [2 4-10] 6a / *Interpret tion* CH I [6^a9-18] 25a b / *Pr or Analytics* K I CH I 39a d / *Met physics* K VI CH 4 [1027^b18 8] 550 c BK IX H 10 577c 578a c / *Soul* BK I CH 3 [4 7 25 33] 636d 637a BK III CH 6 662d 663c

12 LUCRETIUS *N t re of Thi gs* K IV [353-52] 48d 51a esp [469-521] 50b 51a

17 PLOTINUS *Th d E nead* TR VI CH 2 107b-c

18 AUGU TINE *Confess o s* BK XIII pa 37 120d 121a / *Christ a Doctrine* K I CH 31 651d 652b

19 AQUIN S *S mma Theolog ca* PART I Q 13 A 9 AN 71b 72c Q 4 A 7 ANS 81d 82b Q 46 A 2 REP 3 253a 255a Q 58 A 3 301d 302d A 4 ANS 302d 303c Q 59 A I REP I 306c 307b Q 79 AA 8-9 421 423d A REP 2-3 423d 424d Q 82 4 REP 434c 435 QQ 84-89 440b 480c PART I I Q I A 4 RE 612a 613a Q 5 A RE I 636d 637c Q 15 A 4 REP I 683b 684a Q 16 A I REP 3 684b-d

20 AQU NAS *Summ Theologica* ART I-II Q 90 A REP 2 205b 206b P RT II-II Q I A 2 R P 2 3 381 c Q 8 A R 2 417a d Q 18 A 6 613 614d PART III Q II A 3 773d 774c P R SUPPL Q 9 A I AN 1025 1032b

30 BA ON *Advancement f L arning* 32d 56b 59b 61d esp 59c / *Novum O ganum* BK I A I 48 110d 111a

1a(4) The d stinct on of the acti e nd the poss ble int llect in pow r and function

8 ARISTOTLE *Soul* BK III H 4-5 661b 662d

19 AQUINAS *S mma Th olog c* PART Q 54 A R I 285a d A 4 287b 288a Q 55 A REP 289d 290d Q 9 AA 5 414d 419b Q 84 A 4 AN nd REP 3 444d-446b A 6 447c 449 Q 85 A I 451 453c Q 87 A 465a-466c Q 88 A I N nd R 2 469 -471 Q 117 A 595d 597

20 AQUIN *Si mma Th log* PART II Q 5 A 4 9 10b A 5 R P I 2 10b d Q 67 A 2 AN 82c 83b PART Q 9 A ANS 763b 764 AA 3 4 765b 767b Q 12 A AN nd REP 3 776c 777b RT III SUP L Q 9 A 3 R 1034b 1037

31 S INO A *Eth* P RT I ROP 3 SCHOL 366d 367a

(1 *Diverse conceptions of the human mind*)

1b Mind as identical with thinking substance

31 DESCARTES *Discourse* PART IV 51d 52a PART V 56a b / *Meditations* 71b d II 77d 81d IV 89b VI 98c d / *Objections and Replies* 114d 115a c DEF VI VII 130c d PROP IV 133c 135b 136b 152b d 156a 207a 208c d 209c 224d 225d 248b 249d 250b 261a b 276b c

35 LOCKE *Human Understanding* BK II CH I SECT 9–25 123a 127d CH XIX SECT 4 176a b

35 BERKELEY *Human Knowledge* SECT 2 413b SECT 26–27 418a b SECT 98 432a SECT 135 142 440a 441c passim

53 JAMES *Psychology* 130b 131a 221a 226a esp 221a 222b

1b(1) The relation of the mind as thinking substance to sense and imagination

31 DESCARTES *Rules* VIII 13a b 14b XII 18b c 20a c XIV 28a 33b passim / *Discourse* PART I 41d PART IV 53b PART V 59a 60c / *Meditations* II 77d 81d VI 96b 103d esp 96b 98c 99d 101a / *Objections and Replies* DEF I II 130a b POSTULATE II 131a 136d 137a 137d 207d 208a 209c 215b c 218c d 224d 225d 229d 230

35 BERKELEY *Human Knowledge* SECT 2 413b SECT 138 139 440c d

1b(2) Thinking and willing as the acts of the thinking substance

31 DESCARTES *Rules* III 3b 5a XI 17b-18b XIV 28a 33b passim / *Meditations* III 81d 89a esp 81d 82a IV 89a 93a passim VI 101d 102a / *Objections and Replies* DEF I II 130a b 137d 162b 170d 218c d

35 BERKELEY *Human Knowledge* SECT 2 413b SECT 26–28 418a c SECT 138 139 440c d

1c Mind as a particular mode of that attribute of God which is thought

31 SPINOZA *Ethics* PART I PROP 14 359d 360a PROP 25 COROL 365b PROP 29–31 366b 367a PART II AXIOM 2 373d PROP I SCHOL 374a PROP 5 374c d PROP 10 COROL 376d PROP 11 13 377b 378c PROP 20 382d PART III PROP 396a-c PROP 2 DEMONST 396c PART V PROP 40 SCHOL 462d

1c(1) The origin of the human mind as a mode of thought

31 SPINOZA *Ethics* PART I PROP 14 COROL 2 360a PROP 25 COROL 365b PROP 29–31 366b 367a PART II 373a 394d passim esp PROP I 373d 374 PROP 5–6 374c 375a PROP 10 COROL 376d PROP 11 13 377b-378c

1c(2) The properties of the human mind as a mode of thought

31 SPINOZA *Ethics* PART II DEF 3 373b AXIOM 2 3 373d PROP 11 13 377b 378c PROP 17 19 380d 382c PROP 40 387a 388b PROP 48–49 391a 394d PART III PROP 1 2 DEMONST 396a c PROP 3 398b c PROP 9–14 399b-401a PART V PROP 23 SCHOL 458c d

1d Mind as soul or spirit having the power to perform all cognitive and voluntary functions

35 LOCKE *Human Understanding* BK II CH I SECT 4 121d 122a SECT 10 123b d CH VI 131b c CH IX 138b 141a passim esp SECT 1 138b c SECT 15 141a CH XI SECT 1–CH XII SECT 1 143d 147d CH XIX 175b 176b CH XXI SECT 5 6 179c 180a CH XXII SECT 5 205a b SECT 15 208c d SECT 18 209a SECT 22 209d SECT 28–32 211b 212d BK IV CH XIV 364b-365a

35 BERKELEY *Human Knowledge* SECT 2 413b SECT 7 414b c SECT 26–28 418a c SECT 89 430b c SECT 135 142 440a-441c passim

42 KANT *Pure Reason* 194d 195a

53 JAMES *Psychology* 1a 118b 119b 221a 226a esp 221a 222b

1d(1) The origin of the mind's simple ideas sensation and reflection

35 LOCKE *Human Understanding* BK II CH I SECT 1–8 121a 123a SECT 23 25 127b d CH II SECT 2 128a b CH III SECT 1 128d 129 CH VII 131c 133b CH XI SECT 17–CH XII SECT 1 147a d CH XII SECT 8 148c d CH XIV SECT 31 161d 162a CH XVII SECT 22 173d 174a CH XVIII SECT 6 174c d CH XX SECT 1 2 176b-c SECT 15 177d CH XXI SECT 4 178d 179c SECT 75 200b d CH XXIII SECT 1 204a b SECT 5 205a b SECT 15 208c d SECT 29–30 211d 212b SECT 32 37 212c 214b CH XXV SECT 9 216d SECT 11 217a

35 BERKELEY *Human Knowledge* SECT 1 413a

35 HUME *Human Understanding* SECT II DIV 12 14 455d-456b

1d(2) The activity of the understanding in relating ideas the formation of complex ideas

35 LOCKE *Human Understanding* BK II CH II SECT 2 128a b CH VII SECT 10 133a b CH XI SECT 6–7 145a b CH XII SECT 1–CH XII SECT 1 147b 149a CH XIII SECT 4–6 149b-d SECT 27 154c d CH XIV SECT 27 160d 161a SECT 30–31 161c 162a CH XV SECT 2 3 162c d CH XVI SECT 1 2 165c d SECT 5 166b-c CH XVII SECT 3 168b SECT 5 168d 169a CH XVIII SECT 1 174a SECT 6 174c d CH XXII SECT 2 201a b SECT 9 202c 203a CH XXIII SECT 15 208c d CH XXX SECT 3 238c-d CH XXXII SECT 12 245b-c BK III CH II SECT 3 253c CH V 263d 268a CH VI SECT 11 271b-d SECT 26–51 274d 283a CH XI SECT 15 303b-c BK IV CH IV SECT 5 324d

2 The human mind in relation to matter or body

2a The immateriality of mind mind as an immater al principle a spiritual sub stance or as an incorporeal power f nc tioning without a bodily organ

7 PLATO *Phaed us* 124b 126c / *Phaedo* 223b 225c 231c 234b / *Timaeus* 452d 453b 466a b
8 ARISTOTLE *Soul* BK I CH 4 [408b18 29] 638c CH 5 [411b13 18] 641c d BK II CH 2 [413b24 29] 643d 644a BK III CH 4 [429 10-b23] 661b 662a CH 5 662c d
9 ARISTOTLE *Generation of Animals* BK II CH 3 [736b25 30] 277c
17 PLOTINUS *Th d Ennead* TR VI CH 107b c / *Fourth Ennead* TR VII CH 8 195b 196a 197c 198b
18 AUGUSTINE *Conf s ons* BK II par 2 43c d / *City f God* BK VIII CH 5 268c d BK XIX CH 18 523a b
19 AQU NAS *Summa Theolog a* PART I Q 3 A I REP 2 14b 15b Q 7 A 2 REP 2 31d 32c Q 75 A 2 379c 380 A 3 REP 2 380c 381b A 5 NS 382a 383b A 6 383c 384c Q 79 A I REP 4 414a d A 2 REP 2 414d-416a A 3 REP 3 416a 417a A 4 REP 4-5 417a-418c A 5 REP I 2 418c-419b A 6 REP I 2 419b 420d Q 83 A RE 5 436d 438a Q 84 A I NS 440d 442a A 2 ANS 442b-443 A 4 ANS 444d 446b A 6 ANS 447c 449a Q 85 A 6 NS 458d-459c Q 87 A 3 REP 3 467b 468a Q 89 A I ANS 473b 475a PART I I Q 2 A 6 ANS 619d 620d Q 35 A 5 ANS 775d 777a
20 AQUINAS *Summ Tl log c* PART I II Q 50 A 4 9a 10b Q 53 A I ANS and RE 2 3 19d 21a
21 DANTE *D n Comedy* PURGATORY XXV [61-84] 92a b
28 HARVEY *On An mal Gener t n* 494a b
31 DESCARTES *Rules* XII 20a b / *D sc ur e* PART IV 51d 52a 53b PART V 59a 60c / *M d tat on* II 77d 81d VI 96b 103d esp 98c 99a 99d 101d 102a / *Obj ct ons and R pl s* 114d 115a c 119d 120a DEF VI VII 130c d DEF X 130d PRO IV 133c 135d 136b 152b d 156d 207d 208a 209 224d 225d 231a 232d 261a b 276b c
31 S NOZ *Eth s* PART V PRE 451a-452c
35 LOCKE *Human Under tand g* BK II CH XXIII SECT 5 205a b ECT 15 22 208c 209d SECT 28 32 211b 212d esp SECT 32 212c d CH XXVI SECT 12 14 223a 224b pa im SECT 27 227d 228a BK IV CH III SECT 6 313c 315b
35 BERKELEY *Huma Knowledge* SECT 26 418 SECT 137 440b c ECT 141 441 b
40 GIBBON *D I a d Fall* 186a b
46 HEGEL *Philosophy of R ght* P RT I par 48 24b-c
53 J ES *P ychol gy* 130a 221a 223a

2b The potentiality of intellect or reason com pared with the potentiality of matter or nature

8 ARISTOTLE *Physics* BK VII CH 3 [247b1 248 9] 330b d / *Metaphys cs* BK IX CH 2 [1046 37 b24] 571c d CH 5 573a c / *Soul* BK I I CH 5 662c d CH 11 [434 16-22] 667a
19 AQU NAS *Summ Theologica* PART I Q 7 A 2 ANS and REP 2 3 31d 32c Q 14 A 2 REP 3 76d 77d A 8 ANS 82c 83b Q 19 A I A 3 108d 109c Q 50 A 2 REP 2 4 270a 272a Q 55 A I 289a d A 2, ANS 289d 290d Q 58 A I ANS 300c 301a Q 75 A 5 REP I 2 382a 383b Q 79 A 2 414d 416a A 6 ANS 419b-420d Q 84 A 2 ANS and REP 2 442b-443c A 3 REP I 2 443d 444d Q 85 A 5 REP 3 457d 458d Q 87 A I ANS 465a 466c Q 91 A 3 REP 2 486b 487d P RT I II Q 2 A 6 ANS 619d 620d Q 22 A I ANS and REP I 720d 721c
20 AQUINAS *Summa Theolog ca* PART I II Q 50 A 4 REP I 2 9a 10b Q 55 A I ANS and REP 5 26b 27a P RT III Q 9 A 3 ANS and REP 3 765b 766b PART III SUPPL Q 92 A I ANS and REP 10 1025c 1032b
28 HARVEY *On Animal Generation* 494a b
53 JAMES *P ychology* 153a

2c The interaction of mind and body

7 PLATO *Timaeus* 452d-453b 474b-476b
12 LUCRETIUS *Natu e of Things* BK III [94-829] 31b 40c
17 PLOTINUS *F rst Ennead* TR I CH 5 7 2d 4
30 BACON *Ad ancement of Learn ng* 48d 50b esp 48d 49c
31 DESCARTES *D scou se* PART V 60b c P RT VI 61c / *Med tati ns* VI 99d / *Object o s and Repl s* 207d 208a 209c
31 S INOZA *Ethics* PART V PRE 451a 452c
35 LOCKE *Human Understand g* BK IV CH III SECT 28 322a-c
36 STERNE *Tri t am Shandy* 229b 232a
42 KANT *Judgement* 538d 539a
49 DARWIN *Descent of Man* 281a 282c
53 JAMES *P ychology* 2b-4 8a 52b esp 8a 9a 14b 15 19a b 47b 49b 51b 52a 82b 84 94b esp 89b 93a 116a 119b 139a 140b 208a b 222b 223a 259a 288a 289b 311a 450a-451b 694a 742b 755a 758a 759a 827b 835a c p 829b 830a
54 FREUD *Interp tat on of D eams* 154c 155a / *Na cis sm* 402d 404b passim / *I tincts* 412b 414c e p 413d-414a / *General I troduct n* 451c-452a 605b 606a / *Beyond the Pleas e Pr nc pl* 639a 640d 646b-651a / *Ego a d Id* 700a 703a pass m esp 702d 703 / *New Intr d ctory Lectu s* 829a-c

2c(1) The physiological cond t ons of mental acti ty

8 ARISTOTLE *Phys s* K VII C 3 [246b 0-248a9] 330 d / *Soul* BK II CH 9 [421 19-] 652d / *Dreams* 702a 706d

9 ARISTOTLE *Parts of A imals* BK IV C I 10 [686^b22 29] 218b c
10 HIPPOCRATES *Sacred Disease* 155d 160d esp 159a-c
12 LUCRETIUS *Natu e of Things* BK IV [722 776] 53d 54b
12 AURELIUS *Medit t ons* BK III SECT I 259b d
19 AQUINAS *Summa Theolog ca* PART I Q 84 A 7 ANS 449b-450b A 8 REP 2 450b-451b Q 85 A 7 ANS 459 -460b
30 B CON *Adva cement of Learni g* 48d 50b
31 DESCARTES *Rules* XII 19a 20d / *Objections and Replies* 207d 208a 208d 209a 209c
31 SPINOZA *Eth cs* PART II PROP 4 380c PRO 16-17 380d 381d PROP 26 384a b P RT V PREF 451a 452c passim PROP 39 462a c
35 LOCKE *Huma Understand ng* BK II CH I ECT 23 127b H XIX SECT 175b CH XXVII SECT 27 227d 228a CI XXXIII SECT 6 249a b K IV CH III SECT 28 322a c
35 BERKELEY *Hum n Knowl dge* SECT 18 20 416b 417 SECT 50 422c
49 D RWIN *D scent of Ma* 288c d 299c 595d 596a
51 TOLSTOY *W ar a d Peace* PILOGUE II 689c 690a
53 J MES *Psychology* 2b 3a 9a 73b 152a 153a 157a b 166b 167a 367a 373a esp 370a b 380a b 381b 383b 387b 388 413b 420b 427b 430b 453a 455b 456a 497a 501b 506 507a 520a 521 533a 538b 690 691b 758 759a 829b 865
54 FR UD *Hysteria* 87a / *I terpretat on f D ms* 351b 352c 378 b 382a c / *L con sci us* 431d / *General I troductio* 586c d / *Beyond the Pl asu e Pri c ple* 639b d 646b 648a

2 (2) The influence of ment l acti ity on bodily st tes

7 PLATO *Timaeus* 474d 475b
9 ARISTOT E *Mot on of Anim ls* CH 7 [701^b 13]-CH 8 [702 22] 237a c CH 11 239a d
12 LUCRETIUS *Nat e f Th ngs* BK III [136-176] 31d 32b
19 AQ NA *Summ Theologica* P RT I Q 18 A 3 ANS 106b-107c Q 117 A 3 REP 3 598c 599b
25 M NT GNE *Essays* 36c 40d 234 235 332d 333c 532a b
28 HA VEY *M ti f the Heart* 296d / *C cu lat on f th Bl d* 321d 322a 322 d
30 B CON *Ad n ement of Learni g* 48d 50b
35 LO KE *Human U derst nd ng* K I CH XX CT 5 179c BK IV CH I I SECT 28 322a CH X ECT 19 354a-c
35 HUME *H man Understand g* SECT V I DIV 51-52 472b-473c D V 57-58 475c 476b
42 K NT *J dgem t* 538d 539a 560b
44 BO W LL *J hnso* 350c d

51 TO STOY *War and Peace* BK III 141d 142a 142d BK V 213c d BK VI 247d 248a BK IX 350d 354a passim c p 351d 352a 353b d BK XIII 567d 568c esp 68b BK XV 617a b 618a b
53 JA IES *Psycholog* 3a b 64a 67a 132 134b 694a 699a 767a 794a esp 767b 768a 787a 794a 827b 835a esp 828a 830a 841a 848a passim esp 842a b 847b 848a
54 FREUD *O gin and Develop e t of Psycho An lysis* 1b 6b esp 4c 5a / *Hysteria* 25a 59d esp 25a 27a 30a d 35b c 37d 38a 56b 58c 82d 83 / *Na c ssism* 403a c / *Repres sion* 426b c / *General I troducti* 572a b / *Inhib tions Symptoms a d Anxiety* 718a 719d 728c 729a / *New Introductory Lectu es* 852a b

2d The par llelism of mind and body

31 SPINOZA *Ethics* PART I DEF 2 355a P OP 14 COROL 2 360a PROP 25 COROL 365b PART II PROP 1 2 373d 374a P OP 5 7 374c 375c PROP 11 13 377b-378c PROP 15 28 380c 384c PART III PROP 2 396c 398b PRO 10-14 399c-401a PART V P OP I 452d
53 JAMES *Psychol gy* 84a 90b esp 84b 85b 88a 90 96a b 116a 119b esp 119b

2e The red ction of mind to matter the atom c explanat on of its proce es and of the diffe ence between m nd and soul and between mind and body

7 PL TO *Phaed* 241d 242b / *S phist* 567a 568a
8 A ISTOTLE *Soul* BK CH 2 5 633a 641d passim c p CH 2 [403 31 404 30] 633a c [405 7 13] 634b
12 LUCRET U *Natu e of Th ng* BK II [51 293] 18b d [865-990] 26a 27c BK III [94-8 9] 31b 40c BK IV [722-817] 53d 54d [877-961] 55d 56d
17 PLOTINUS *S cond En ead* TR IX CH 5 68b / *Th d Ennead* TR I C 2 78d CH 3 79b c / *F urth E nead* TR VII CH 8 195b 196c
19 AQUIN S *Summa Theol g ca* PART I Q 84 A 2 ANS and R 2 442b 443c A 6 ANS 447c 449a
23 HOB ES *Leviath n* PART I 49a d 52c PART II 162c
31 D C RTES *Objections a d Repli* 224d 226d 261a b
35 LOCKE *H m n U derstand* K IV CH III SECT 6 313c 315b H X SE T 5 350a b S CT 10 351b 352 SECT 17 353b c
35 BE KELEY *H m n Knowl dge* S CT 93 431b ECT 137 440b SECT 141 441a b
42 KANT *Judgement* 599d 600d
53 JAM S *P ych l gy* 95a 107b esp 95b 98 115a 118b esp 117a 118b
54 FR UD *New Int oduct ry Lectu s* 829a b

3 Mind in animals and in men

3a Mind reason or understanding as a specif ic property of human nature comparison of human reason w th animal intelligence and instinct

5 Aeschylus *Prometheus Bound* [442-444] 44c
5 Sophocles *Antigon* [332 375] 134a b [683-684] 137a
5 Euripides *Suppl ant* [195 213] 260a b / *Trojan Women* [665-672] 275d
7 Plato *Protago a* 44a c / *Timaeu* 452c 454a
8 Aristotle *Top s* bk v ch 3 [132 17 22] 183a / *Physics* bk ii ch 8 [199 20 23] 276c / *Met phy c* bk i ch 1 [980a28-b27] 499a b / *Soul* bk ii ch 3 [414b17 20] 644d [415a7-1] 645b bk iii ch 3 [427b7-14] 659d 660a [428 20-24] 660c ch 10 [433 8-13] 665d / *Memory and Rem n scenc* ch 2 [453 5 4] 695b
9 Aristotle *History f An mals* bk i ch 1 [488b20-2,] 9d bk viii ch 1 [588 18 b4] 114b d / *Pa ts of Animal* bk i ch 1 [641b5 8] 164b c / *Generation of An mals* bk i ch 23 [731 24 b8] 271c d bk ii ch 6 [744 27 31] 285c / *Ethi s* bk i ch 7 [1097b23 1098a7] 343a b ch 13 [11 2 33 1103 3] 347d 348c bk iii ch 2 [1111b6-12] 357b-c bk vi ch 2 [1139 17 26] 387d bk vii ch 3 [1147a25 b5] 397c d bk ix c 1 9 [1170 26-18] 423d 424a bk x ch 7 [1177b26-1178 8] 432c ch 8 [1178b 23 32] 433c / *Pol t cs* bk i ch 5 [1254b 0-25] 448b bk i ch 13 [1332 39-b10] 537a b ch 15 [1334b12 28] 539c d / *Rheto ic* bk i ch 1 [1355b1-3] 594d
12 Epictetu *D sc u s* bk i ch 3 108b c c 1 6 110c 112b ch 9 114c 116b bk ii ch 8 146a 147a bk iii ch 7 183c 184a bk iv ch 7 233a b
12 Aurelius *M d tat n* bk iii sect 16 262d 263a c bk v sect 16 271c d bk vi sect 23 276b bk viii sect 7 286a sect 41 288d bk ix sect 9 292b-d
17 Plotinus *F t Enn ad* tr i ch 7-13 4a 6b c p ch 10 5a / *Third Enn ad* tr iii ch 4 94c 9 c tr iv ch 2 97d 98a / *F fth Ennead* tr i ch 10 213d 214a / *Sixth Enn ad* tr vi ch 4-6 323c 325a
18 Augu tine *Conf n* bk x par 11 74a b bk xiii par 37 120d 121a / *City of G d* bk v ch 11 216c d x vii ch 23 256b-c bk viii ch 6 269a bk xi ch 27 337d 338a bk xxix ch 24 610c d / *Christian Doctrine* bk i ch 8 626c 627a c 1 22 629b-c
19 Aquinas *Summa Theolog ca* part i q 3 a 1 rep 2 14b-15b q 18 a 2 re 1 105c 106b a 3 ans 106b 107c q 30, a 2 rep 3 168a 169b q 59 a 3 ans 308b 309a q 6 a 5 rep 4 394c 396a q 78 a 4 ans and rep 4-6 411d-413d q 79 a 5 rep 3 418c 419b a 6 rep 1 419b 420d a 8 rep 3 421c 422b a 10 rep 2 423d 424d q 83 a 1 ans 430d 438a q 84 a 2 rep 1 442b 443c q 86 a 4 rep 3 463d 464d q 91 a 3 rep 1 2 486b 487d q 96 a 1 rep 4 510b 511b a 2 ans 511b d q 115 a 4 ans 589d 590c q 118 a 2 ans and rep 2 601c 603b part i-ii prologue 609a c q 1 a 1 ans 609b-610b q 10 a 3 ans 664d-665c q 12 a 5 672a-c q 13 a 2 rep 3 673c 674c q 17 a 2 687d 688b
20 Aquinas *Summa Tl eologica* part i-ii q 50 a 3 rep 2 8b 9a q 110 a 4 rep 3 350d 351d part iii suppl q 79 a 1 ans 951b 953b
21 Dante *D vine Comedy* hell xxxi [40-57] 46c purgatory xxv [52-84] 91d 92b par adise v [19-24] 112b
23 Hobbes *Leviathan* part i 57d 59b-c part ii 100a c
25 Montaigne *Essays* 119b d 184a c
27 Shakespeare *Hamlet* act iv sc iv [32 39] 59a
28 Harvey *On Animal Generation* 428a 434a
30 Bacon *Novum Organum* bk ii aph 35 163d 164a
31 Descartes *Discou se* part i 41b d part iv 51d 52a part v 56a b 59a 60c / *Med ta t on* 71b d ii 77d 81d / *Objections and Re pl s* 156a d 209b 226a d 276c
31 Spinoza *Eth cs* part iii prop 57 schol 415b
32 Milton *Pa adise Lost* bk viii [379-411] 240b 241a bk ix [549-566] 259b
33 Pascal *Pensé s* 339-348 233a 234a 365 236a 397 240b / *Vacuum* 357a 358a
35 Locke *C vil Go ernment* ch vi sect 56-58 36d 37b ch xiv sect 163 164 63a-c / *Human Understand ng* intro sect 1 93a b bk ii ch xi sect 4 11 144d 146a csp sect 10-11 145d 146a ch xxvii sect 12 223a b bk ii ch vi sect 26-27 274d 276a sect 29 276b-d ch x sect 17 295d 296b ch xi sect 20 304c d bk iv c 1 xvi sect 1 371c d
36 Swift *Gull er* part iv 151b 152a 159b-160a
38 Montesquieu *Sp rit of Law s* bk i 1d 2b
38 Rousseau *Inequality* 336b-c 337d 338a 341d 349b c / *Social Contract* bk i 393b-c
40 Gibbon *Decl ne and Fall* 409d-410a
42 Kant *Pure R ason* 199c 200c / *Fund Prin Metaphys c of Mo als* 256d 257a 264d 265a 281c 282c / *Pract cal Reason* 316c 317a / *Pref Metaphysi al Element of Eth cs* 372a b / *Int o Metaphysic of M al* 386b-d / *Judgement* 479a c 584d 585c 587a 588a 602b d [fn 1]
43 M ll *Liberty* 294d 295b
46 Hegel *Ph lo ophy of Right* intro par 31 17a-c part iii par 262 264 83d 84 a di

TIONS 4 116a d 121 136c d 157 142b c / Pl os phy of H t ry INTRO 156c 168b d 178a b 185a 198a P RT I 258a PART III 304d-30 b
49 D VIN Desce t f Man 287a-c 319b-c 331b-332a
51 TOLSTOY War and Peace P LOGUE II 689c 690a
53 JAMES Psychology 85a b 678b 686b esp 686 b 691a b
54 F EUD U co scious 429c d

3b Mentality as a common p operty of men and an mals the d fferences between human and animal intelligence in degree or qual ty

9 ARISTOTLE History of An mals BK VIII CH 1 [588 18-^{b}4] 114b d BK IX C 7 [612^{b}18-32] 138b-c / P rts of An mals BK IV CH 10 [686^b 2-687^{a}23] 218b d
12 LU R US Natu e of Things BK V [10 8 1090] 74c 75b
23 HO BES Lev than PART I 52b 53a b 53d 54a 63a 64a-c 79c PART I 100a c PART 267b
25 MONTAIGNE Essays 215a 232c esp 216c 219 231d 232
30 B CON Novum Organum BK II APH 35 163d 164a
31 D SCAR ES Object ons a d Repl es 209b 226 -d
32 MILTON Paradise L st K VIII [369-397] 240a b
35 LOCKE Human Underst d g BK II CH XX II S CT 8 221a 222a BK I CH VI S CT 12 271d 272b esp 272b SECT 2 273d 274a BK IV CH XVI SECT I 370 371a
35 HUME H man Understanding SECT IX 487b 488c
38 R U S AU I quality 337d 338a
42 KANT Judgement 602b d [fn 1]
43 M LL Ut l ta an sm 448a-449 p ssim 469c d
49 DARWIN D cent of Man 287a 303d esp 287 294c 319b-d 591d 592a
51 TOL TOY W ar and P ac OGU I 689 690a
53 J ME P sch l gy 5a 6b 13a 15 p ssim 47b 51a p ss m esp 49b 50 85a b 676b 677a 678b-686b 690b 691 b 704a 706b 873a
54 FREUD I terpr t t o f Dreams 385b-c

3 The evolution of m nd or intell gence

38 ROUSSE U I qual ty 337d 342c 348d 349
49 D RWIN Descent of Ma 281 -c 286c 288d 299b-c 320 330a c sp 320a 321b 328b d 349b d 566b 567b 591d 592a
53 JA E P ychology 41b 51a 52b 95b 98a 800b 851 861a e p 851a b 857b 858a 859a 860a 878a 890a 897b esp 897a b

54 FREUD Instincts 413a d / General Introduction 591d 592b / Bey d the P ea u Principle 647a 648a / Ego an l Id 707b 708b esp 708a b

4 The var ous states of the human mind

4a Individ al differences in i telligence de grees of cap c ty for underst nding

4 HO ER Odyssey BK VIII [165-185] 223d 224a
5 AI ISTOPHANES Frogs [1482 1499] 581d 582a
7 PLATO Republ c BK V 358a 360c BK VI 373c 375b 383c d BK VII 401b c / Theaete tu 513a d 528a 540c 541a / Seventh Letter 809c 810d esp 810c
8 ARISTOTLE Posterior Analytics BK I CH 34 [89^{b}10-15] 122c / Topics BK VIII CH 4 [163^b 8 16] 222a
9 ARI TOTL Pa ts of An mals BK IV CH 10 [686^b 2 29] 218b-c / Rhetoric BK III CH 1 [1404 15 19] 654b CH 2 [1405^{a}7-9] 655b / Poetics CH 2 [1459 5-7] 694d
12 EPICT TU Discourses BK III CH 6 182a b
18 AUGU TINE Co fessions BK IV par 31 26c 27a BK XIII par 47 123d 124a
19 AQUINAS S mma Theologica PART I Q 89 A 1 ANS 473b 475 Q 117 A AN 595d 597c
20 AQUINAS Summ Theolog a PART III Q 10 A 4 REP 1 771b 772a
23 HOB E Lev th PART I 60a 61a 66c 67a 67d 68c 84c d PART II 154a b
25 MONTA GNE Essays 60a-c 65a 71d 72b 150c 151a 240a c 319 320a
31 DESCARTE Di course PART I 41b d
31 S INO A Et cs PART II PROP 3 SCHOL 378a-c PART V ROP 38 39 461d-462c
33 PA CAL Pen é s 1-2 171a 172b 7 173a
35 LOCKE Human Under t di g K II CH X S CT 8 142d 143a H X SECT 144a-c
35 HUME Human Understanding CT IX D V 84 488b d [fn 1]
36 S RNE Tr t am Shandy 235b 236a 269b 270a 271b 273a
39 SMITH W ealth of Nations K I 7d 8
42 KANT J dgem nt 525 532a esp 526a d 528 530 586a 587a
43 F DERALIST NUM ER 79 234b d
43 M LL Liberty 297 299a / Represent t e Go ernment 385b d
44 BOSWELL J hn on 20c 283
46 H GEL Ph l s phy of R ght P T III p 166 59d 60a ADD TIONS 7 134a b / Ph l p y f H story INTRO 166b 168a
47 GOETHE Faust RT I [5 -6 3] 15a 17a
49 D RWIN De ent of M n 266c 566a 567b
51 TOLSTOY War and P ace K VI 26 c d K XV 639 b
53 JA Psy h logy 14b-15a 274a 275a 315a b 345b 381a 431b-432 esp 432b-433b [fn 1] 678b 686b 690a 691b 693a pass m
54 FREUD Ci il a ton nd Its D ntents 787d 788b [fn 3]

(4 *The various stat s of the human m nd*)

4b The mentality of children

7 Plato *La h s* 35d / *Apology* 200c d / *Gorg as* 261a c / *Republic* bk ii 320c 321d esp 321d bk iv 353b-c
8 Aristotle *Physics* bk i ch i [184 21 b14] 259b bk vii ch 3 [247b13 248 6] 330c d / *Mem ry and Remin cen e* ch i [450 26-b9] 691a b
9 Aristotle *H tory of An mals* bk viii ch i [588 18 b1] 114b d / *Part of An mals* bk iv ch 10 [686b22 29] 218b c / *Eth* bk i ch 3 [1094b29-1095 2] 340a b bk iii ch i [1119 34 b19] 366a c k vi ch 8 [1142 12 19] 391b bk x ch 3 [1 74 1 4] 428b
12 Lucretius *Natu e of Things* bk iii [445 450] 35d
18 Augustine *Confe ons* bk i par 7 13 2c-4c / *C ty of God* bk xxi ch 16 573b 574a
19 Aquinas *S mma Th ol gica* part i q 85 a 3 ans 455b 457a
23 Hobbes *Le athan* part i 60b
25 Montaigne *Essay* 72b 73c
27 S akespeare *T o lus and C e da* act ii sc ii [163 173] 115b
35 Locke *C il Governm nt* ch vi sect 54-63 36c 38c passim / *Human Under tand ng* bk i ch i 95b d 103d esp sect 15 16 98d 99c ch ii sect 22 111a b bk ii c i sect 1-8 121a 123a esp sect 6-8 122b 123a sect 21 22 126d 127a ch ix sect 5 7 138d 139b ch xi sect 8-9 145b-c ch xxxiii sect 7 10 249b-d
35 Berkeley *Human Knowledg* intro sect 14 408d-409a
35 Hu e *Human Understand ng* ect iv d v 33 463c d
51 Tolstoy *Wa and Peace* bk x i 559d
53 Ja es *P ych logy* 270a 413b [fn 2] 456b 457a 684b 685a
54 Freud *Interp tat on f Dreams* 241b 363b 364b 379d 380b / *Na m* 400a / *General Introd t on* 526d 5?7b / *C vl at n and Its D content* 768b c

4c The states of the possible intellect its po tent al ty habits and actual ty

8 Aristotle *Ph)* bk vii ch 3 [247b 248a9] 330b d / *S ul* bk i c i [412 6-12] 642a [412a22 28] 642b ch 5 [417 21 418 6] 647d 648d bk iii c 4 [429b5 430a2] 661d 662b
19 Aquinas *Summa Theol gica* part i q 19 a i ans 108d 109c q 34 a i rep 2 185b-187b q 9 a 4 r 2 417a 418c aa 6-7 419b 421c a 10 ans 423d-424d a i ans 425c 426b q 84 a 7 rep i 449b-450b q 86 a 2 ans and rep 2 462a-463a q 87 aa i 3 465a 468a
31 Spi oza *Eth s* part i prop 31 schol 366d 367a

4d The condition of the mind prior to experience

4d(1) The mind as completely potential the mind as a *tabula rasa*

8 Aristotle *Soul* bk iii ch 4 [429b23 430a2] 662a b
19 Aquinas *Summa Theol g ca* part i q 79 a 2 ans 414d 416a q 84 a 3 443d-444d a 6 447c 449a q 89 a i rep 3 473b 475a q 117 a i ans 595d 597c
20 Aquinas *Sum na Theolog ca* part iii q 9 a i ans 763b 764c
33 Pascal *Pensé s* 327 231a b
35 Locke *Human Understand ng* 90d 91b bk i 95b d 121a c e p ch i sect i 95b d 96a sect 15 98d 99a sect 23 101b 102a ch ii sect 22 111a b ch iii sect 23 119b 120a bk ii ch i 121a 127d esp sect 2 121b c sect 6 122b c sect 9 123a sect 17 125c d sect 20-25 126d 127d ch ix sect 6 139a ch xi sect 16-17 147a b
35 Hume *Human U derstanding* sect ii 455b 457b
36 Sterne *T tram Shandy* 234b 235a
53 James *Psychology* 49b 50a 852b 861a esp 852b 859b 860b

4d(2) The innate endowment of the mind with ideas instinctive determinat ons

7 Pl to *Phaed u* 124a 126c esp 126a c / *Men* 179d 183a 188d 189a / *Phaedo* 228a 230d
8 Aristotle *Poster or Analyt cs* bk i ch i 97a d bk ii ch 19 [99b20-33] 136a b / *Metaphys c* bk i ch 9 [992b24-993 11] 511a-c
12 Epictetus *D ou* bk i ch 22 127c d bk ii ch 11 150a c
17 Plotinus *F t Ennead* tr ii ch 4 8b c / *Fou th Enn ad* tr iii ch 25 155b tr i c i 5 160d 161b / *Fifth Enn ad* tr ii ch 2 216b
18 Augustine *C nf ions* x x par 10 73d 74a par 16-19 75b 76b par 26-38 78a 81a / *C ty f God* bk viii c i 6 269b c / *Ch stia Doctrin* bk i ch 9 627a
19 Aquinas *Summa The l g ca* part i q 84 a 3 443d 444d a 4 ans 444d 446b a 6 ans 447c-449a q 89 a i rep 3 473b-475 q 117 a i ans 595d 597c
28 Harvey *On An mal Genera on* 333d 335 esp 334c d
30 Bacon *Adv ncement f Lea n ng* 1b c
31 Descartes *Rule* iv 5c d 6d viii 13c d / *Discou e* part iv 53b p rt v 54c / *M d tation* ii iii 77d 89a esp iii 83b vi 96d 97a / *Object n and R pl s* 120c d 140c 215b c 224b d
31 Spinoza *Eth cs* part v prop 23 sc ol 458c d
35 Locke *H man Under tand ng* 90d 91b bk i 95b d 121a c esp ch i sect i 95b d 96a se t 15 98d 99a sect 23 101b 102 ch iii

SECT 2 118b 119a BK II CH I SECT 9-25 123a 127d esp SECT 9 123a SECT 17 125c d SECT 20-24 126d 127c CH IX SECT 6 139a H XI S CT 16-17 147a b

35 HUME *Human Understand ng* SECT II DIV 17 457b d [fn 1]

42 KANT *Pure Reason* 58 59b 113c 118a / *Practical Reason* 352c 353a / *Judgement* 551a 552

53 JAMES *Psychology* 49b 50 767b

54 F EUD *General I troduction* 512b 513b 526d 532b 599a b / *G o p Psychology* 688d 689b / *Ego and Id* 707c 708b esp 708b / *I hib t ns Symptoms and Anxiety* 721a

4d(3) The tr nscendental or *a prio* forms and categories of the m nd

42 KANT *Pu e Reason* 14 108a c esp 14a 15c 22 c 23a 24a 25b-c, 27c 28d 29d 32a c 34a-c 37b 39c, 41 45b 48d 51d 52 55a 56d 59b 61 62c 65d 66d 94b-95a 99a 101b 146a 186d 187a 192 b / *Practical R ason* 307d 308b 349b 350c

53 JA *Psychology* 628b 631a 851a 852a 859 882a esp 859b 861b 865b 867a 868a 879b 886b 889a esp 889a

4e The cond t on of the human mind when the soul is sep r te from the body

7 PLAT *Ph drus* 124 126c / *Phaedo* 223a 225c 246d 247b / *Republic* BK X 440d 441a

8 A IST TLE *S ul* BK I I CH 5 [43 20-25] 662d

12 AUR IU *Med t tion* BK IV SECT 21 265b c

13 VIRG L *Aeneid* BK VI [724 751] 230b 231

17 P OTINUS *Fou th E ne d* TR III CH 18 151b c TR I CH 25 TR V CH 5 154d 161b

18 AU USTINE *City of God* BK XXII CH 30 618a

19 AQUIN S *S mma Th ologica* P RT I Q 77 A 8 406b-407a Q 89 473a 480c

21 DANT *D vine C medy* PURGATORY XXV [I 8] 91b-92 p [9-84] 92b

31 S INOZA *Ethics* PART V PRO 21 458a ROP 23 458b d ROP 4 462 d

41 G ON *D l e and Fall* 233d

44 BOSWELL *Johnso* 192d 193c

4f S pernatural states of the human int llect the st te of innocenc be titude the human ntellect of Chr st

OLD TESTAMENT *Ge sis* 2 ,- 0 3 4 7 22 / *E odus* 33 I 3 / *Ez k l* 10—(D) *E e h l* I I

N w T TA I NT *M tthew* 5 8 / *J h* 14 9 21 / *I Cori thi n* 3 12 / *II Corinth a* 12 4 / *I J hn* 3—

18 AU U TIN *C fess* K X par 5 68c / *C ty f God* BK X CH 2 299d 300 CH 8 316b d BK XXI I 29 614b 616d

19 AQUIN *Summa Th olog a* ART I Q 84 A 5 446c-447c Q 86 A 2 R P I 462a-463 Q 94 501c 506a Q 101 522 523d

20 AQUINAS *S mma Theologica* PART III Q 5 A 4 739a 740b Q 6 A 2 741c 742a QQ 9-1 763b-779d PART III SUPPL Q 92 1025b 1037c

21 DANTE *Div e Comedy* PARADISE V [I 2] 112a b VII [64-84] 115d 116a XIII [31-111] 125d 126c XIV [1-66] 126d 127c XV [37-84] 128d 129b XXI [82 I 2] 139a b XXXII [139]-XXXI I [145] 156a 157d

5 The weakness and limits of the human m nd

5a The fall b l ty of the hum n mind the ca ses of error

7 PLATO *Phaedo* 224a 225 / *R pu bl c* BK II 388a 389d / *Thea t t s* 536 544a / *Sophist* 557b 558d esp 558b

8 ARISTOTLE *Pri r An lytics* BK II CH 21 87d 89b / *Posterior Analytics* BK I CH 6-18 109b 111c / *S phist cal R futations* CH I [65 13-18] 227c / *M taphys cs* BK IV CH 5 [1009 5 1010 14] 528 529d CH 6 [I II 3 13] 530d CH 7 [10 18-22] 532a BK IX CH 10 [105 b18 1052 4] 577d 578a c BK XI CH 6 [1062b12-24] 590d 591a / *Soul* BK II CH 6 [418a6- 8] 648d 649a BK I CH 3 [427b6- 5] 659d 660a [428 5 429 2] 660b 661a CH 6 [430a26-b5] 662d 663a [43 b26-30] 663b c CH [433 21 28] 665d-666a / *Dreams* CH 2 [460 33 b27] 704b d

9 AR STOTLE *Rhetoric* BK III CH 7 [1408a20-25] 659b

12 LUCR TIU *N ture of Th gs* BK IV [353-521] 48d 51a esp [469-5 I] 50b-51a

12 AUR L U *Med tat on* BK VII SECT 55 283b c

18 AUGUSTINE *C ty of God* BK X CH 2 323 BK XIX CH 8 523a b / *Ch tian Do tri e* BK I CH 9 627a CH 2 627c d BK I CH 28 668a

19 AQUINAS *S mma Th ologica* PART I Q 17 A I ANS a d RE 100d 101d A 3 102d 103 Q 84 A 8 450b-451b Q 85 A R P I 451c 453 A 6 458d-459c Q 89 A 5 ANS 477a 478b Q 94 A 4 505a 506a

20 AQU NAS *Summa Theologica* PART I I Q 53 A I AN 19d 21a

21 D NT *D vine Com dy* PARADISE XI I [88-4] 126b d

23 HO S *Levia han* PART I 57d 58a 58d 60a

25 MONTA NE *Essays* 14c 15a 271a 276a p 273b 274a 287b 292d 497c d 500b d 517d 518b

26 SHAK ARE *Troilus a d Cressid* ACT V C I [6-114] 136a

28 HARV Y *Mot n of the H a t* 268a / *On An mal Gener t n* 333b

30 BA ON *Ad ancement f Le g* 2c 4 11a 15a pas m 27a c 38d 39 51 d 60 61c esp 61b 90b d / *N um O g um* K I 107a 136 pas m esp APH 38-68 109 116a

(5 *The weakness and limits of the human mind*
5a *The fallibility of the human mind: the causes of error*)

31 DESCARTES *Rules* II 3a VIII 13a b XII 22c 23b / *Meditations* I II 75a 81d esp II 80a 80d 81a III 83a IV 89a 93a VI 100a 103d / *Objections and Replies* 141a 142c 215b 216c 229d 230d

31 SPINOZA *Ethics* PART II PROP 17 SCHOL 381b d PROP 24 31 383c 385c PROP 40 SCHOL 2 PROP 41 388a c PROP 44 COROL I SCHOL 389c 390a PROP 47 SCHOL 390c 391a PROP 49 SCHOL 391d 394d

32 MILTON *Paradise Lost* BK VIII [179-197] 236a b

33 PASCAL *Pensées* 82-88 186b 189b 365 366 236a 394 395 240b / *Geometrical Demonstration* 440b-441b

35 LOCKE *Human Understanding* BK II CH XI SECT 3 144c d CH XXI SECT 60-70 194a 197b passim CH XXX SECT 2 238b c CH XXXIII 248b-251d esp SECT 18 251a c BK III CH IX SECT I 290c 291a CH X SECT 6 295d CH XI SECT 4 300c BK IV CH XVII SECT 9 13 377d 378c CH XX 388d 394c

35 BERKELEY *Human Knowledge* INTRO SECT 1 4 405a d

35 HUME *Human Understanding* SECT I DIV 6 453c SECT V DIV 45 469c SECT VII DIV 48 470d-471c

36 STERNE *Tristram Shandy* 194a 234b 236b

38 MONTESQUIEU *Spirit of Laws* BK I 1d

42 KANT *Pure Reason* 1a b 108a d 109b c 129c 173a esp 133c d 193a b 200c 209d 229b c 233d 234b / *Fund Prin Metaphysic of Morals* 260d 261b 283d 284d

43 FEDERALIST NUMBER I 29d NUMBER 37 118c

43 MILL *Liberty* 274b 293b passim 293d

53 JAMES *Psychology* 122b 125b 241a b 361a b 460a-469a esp 462b-464a 468b-469a 508a 520a esp 508a 610b 625a passim esp 618b-621a 625a

54 FREUD *Interpretation of Dreams* 148d 149a 210c d 337a c 379b d / *General Introduction* 453b-476a c passim 602b c / *War and Death* 760d 761a / *New Introductory Lectures* 819b-c

5b The natural limits of the mind: the unknowable; objects which transcend its powers; reason's critical determination of its own limits or boundaries

OLD TESTAMENT *Exodus* 33 12 33 / *Job* 9.21 11 7-9 (14 28 12 21 36.26 37 14 23 38 1 42 6 / *Psalms* 139 1-6—(D) *Psalms* 138 1-6 / *Proverbs* 20 24 25 3 27 1 / *Ecclesiastes* 3 11 6 11 12 8 7 16-17 9 11 12 11.2-6—(D) *Ecclesiastes* 3 11 6 11-7 1 8 7 16-17 9 11 12 11.2-6 / *Isaiah* 55 8-9 —(D) *Isaias* 55 8-9

APOCRYPHA *Wisdom of Solomon* 9 9-18—(D) OT *Book of Wisdom* 9 9-19 / *Ecclesiasticus* 1 1 3 18 4 7 24:27 29—(D) OT *Ecclesiasticus* 1 1 2 18 4-6 24 37 39

NEW TESTAMENT *Mark* 13 31-37 / *John* 1 18 / *Acts* 1 6-7 / *Romans* 11 33 34 / *I Corinthians* 2 16 / *I Timothy* 6 14 16 / *James* 4 13 15

5 AESCHYLUS *Suppliant Maidens* [86-95] 2a b

5 SOPHOCLES *Ajax* [1419-1421] 155c

5 EURIPIDES *Helen* [1137 1150] 309a

7 PLATO *Parmenides* 489d 491a

8 ARISTOTLE *Physics* BK II CH 4 [196 5 7] 272c [196b5 7] 273a / *Metaphysics* BK I CH 2 [982b28-983 11] 501a b BK II CH 1 [993 30-b11] 511b d BK XII CH 7 [1072b13 29] 602d 603a

9 ARISTOTLE *Parts of Animals* BK I CH 5 [644b20-645 4] 168c d / *Ethics* BK X CH 7 [1177b29-1178 2] 432c

12 LUCRETIUS *Nature of Things* BK IV [469-521] 50b 51a

18 AUGUSTINE *Confessions* BK I par 1 1a b BK VI par 6-8 36c 37c / *City of God* BK VIII CH 6 269b c BK X CH 31 319b-d BK XII CH 7 346c d

19 AQUINAS *Summa Theologica* PART I Q 1 A 1 3b 4a Q 3 A 4 REP 2 16d 17c Q 12 A 4 53b-54c AA 11 12 59d 61c Q 29 A 1 REP 1 162a 163b Q 32 A 1 175d 178a Q 46 250a 255d Q 50 A 2 ANS 270a 272a Q 79 A 4 A 5 417a 418c Q 84 A 5 446c-447c AA 7-8 449b-451b Q 85 A 8 460b-461b Q 86 461b 464d Q 88 468d 473a Q 94 AA 1 2 501d 504a Q 11, A 2 ANS and REP 1 597c 598c

20 AQUINAS *Summa Theologica* PART I II Q 68 A 2 89c 90c Q 91 A 4 210c 211c Q 93 A 2 216c 217b Q 109 A 1 338b 339c Q 1 2 A 5 359c 360c PART II II Q 2 A 3 392d 393c Q 8 A 1 417a d Q 9 A 1 423c 424b

21 DANTE *Divine Comedy* HELL VII [61-96] 10b c PURGATORY III [2-45] 56a b X [121 129] 68c d PARADISE II [46-148] 108b 109b passim IV [28-48] 111a XIX [40-9] 135c 136a XXI [82 102] 139a b

23 HOBBES *Leviathan* PART I 49 52c 54a-c 78d 79a PART II 163a

25 MONTAIGNE *Essays* 80b 82b 209a c 212a 215a 238c 239c 267c 268a 271b 273b 291b-294b 497b 502c passim esp 501d 502c

28 HARVEY *Motion of the Heart* 273c d / *On Animal Generation* 389b 492c

30 BACON *Advancement of Learning* 2c-4c 17b-c 41b d 54b c 96d 97b / *Novum Organum* BK I APH 1 2 107a b APH 9-10 107d APH 21 108b c APH 37 109b-c APH 48 110d 111a BK I APH 15 149a

31 DESCARTES *Discourse* PART I 43c / *Meditations* I 75a 77c passim III 86d 8 IV 89a 93a VI 96b 103d passim / *Objections and Replies* 112a c 123d 126b 168d 169 215d 216c 259a b

31 SPI OZA *Ethics* PART II AXIOM 5 373d PROP 24 31 383c 385c;
32 MILTON *P radise Lost* BK V [544-576] 187a b BK VI [296-301] 202b BK VII [109-130] 219b 220a BK VIII [114 130] 234b 235a / *Samson Agonistes* [293-314] 346a b
33 PASCAL *Pensees* 72 181a 184b 184 241 205a 217b
35 LOCKE *H man Understandi* 87d INTRO 93a 95d BK II CH I SECT 5 122a b SECT 24 127b c CH II SECT 3 128b-c CH VII SECT 10 133a b CH X SECT 9 143a-c CH XIV SECT 26 160c d CH XV SECT 11 165a b CH XXII SECT 9 202c 203a CH XXIII SECT 12 13 207a 208b passim SECT 36 213c d BK III CH III SECT 2 254d 255a CH VI SECT 9 270d 271a CH XI SECT 23 305a b BK IV CH III 313a 323d CH VI SECT 4 16 331d 336d passim CH X SECT 19 354a c CH XII SECT 9-13 360d 362d pass m CH XIV SECT 1 2 364b c CH XVI SECT 12 370b 371a CH XVIII SECT 7 383b
35 BERKELEY *Human K owledge* INTRO SECT 1 3 405a-c SECT 81 428c d SECT 101 432c d
35 HUME *Human Understanding* SECT I DIV 2 451b-c DIV 6-10 453b-455b passim S CT I DIV 13 16 455d-457a SECT IV DIV 26 460b c DI 29 461a d SECT V DIV 36 464d-465a SECT VII DIV 57 475b-c DIV 60 477a c SECT VIII DIV 62 478c DIV 71-72 482c-483c DIV 81 487a SECT XI DIV 110 501a b SECT XII 503c 509d passim esp DIV 130 508c-d
40 GIBBON *De l ie a d Fall* 308 d
42 KANT *Pure Reason* 1a 250 c esp 1a 13d 15 16c, 19 20a 25b 26b 27b 28b 29d 33d 53b 54b 93c 99a 101b-107b 129c 130a, 133a 134d 146a 149d 153a c 157d 175b [fn 1] 196b-197c, 200c 209d 215d 216c 217d 218a, 219 227a 229b c 230c 235a 247a b 248d 250 c / *Fund Prin Met physic of Mo ls* 260d 261b 281c 282d 283d 287d / *Practic l Re* 296a d 307d 308b 309b 310d 314d 331a 332d 335c 337c esp 337a c 354d 355d / *J dgei ent* 461a c 465a 497a-498b 547b d 551 552c 564a 570b 572b 574b-577 579a 581a b 584 d 599d 600d 603a 604b
44 B SWELL *Joh son* 126b 129a
47 G ETH *Faust* PART I [354 376] 11a b [558-563] 15b [602-655] 16b 17b [064- 067] 26b [1765 1784] 42b [8 0-1815] 43 PART II [4917 4922] 122 [1 433 452] 278a b
48 MELVI LE *M by Dick* 244b 245b 272b-276b esp 276a b 366a b
51 TOLST Y *War a d P ce* BK I 50b-c BK V 196a 197c EPILOGUE II 693d 694d
52 DO TO VSKY *B others Ka am ov* K V 120d 121c
53 J MES *Psychol gy* 223b 224a 262a 269a 388a 400a b 822b
54 F UD *Interpret tion of D ms* 383b c / *U consci u* 430b c

5c The elevation of the human mind by divine grace faith and the supernatural g fts

OLD TESTAMENT *Genesis* 15 17 1 19.23 2 9-18 26 1-6 46 1-4 / *Exodus* 19 24 esp 24 12-18 31 1 11 33 11 23 / *Numbers* 12 / *Joshua* 3 7-8 5 13-6 5—(D) *Josue* 3 7-8 5 13-6 5 / *Judges* 6 11 4 / *I Kings* 3 5 15 4 29-34 9 1-9 19—(D) *III Kings* 3 5 15 4 29-34 9 1-9 19 / *I Ch on cles* 1—(D) *I Pa alipome non* 17 / *Isaiah* 6—(D) *Isaias* 6 / *Ezekiel* 1 10—(D) *Ezech el* 1 10 / *Da el* 1 7 12
NEW TESTAMENT *Matthew* 17 1-9 / *Luke* 2 25-35 / *Joh* 1 1 18 / *Acts* 2 1-21 9 1-8 10 44 47 / *I Corinthia s* 2 6-16 14 / *II Cor nthians* 12 1-9 / *Revelation*—(D) *Apocalypse*
18 AUGUSTINE *Confessions* BK I par 1 1a b BK VI par 6-8 36c 37c BK IX par 23 25 68a c BK X par 65 87d 88a / *City of God* BK X CH 2 3 299d 301a BK XI CH 2 323a c BK XIX CH 18 523 b BK XXII CH 29 614b-d / *Christian Doctrine* BK III CH 37 674c d BK IV CH 15 16 685c 686c
19 AQUINAS *Summa Theologica* PART I Q 1 A 1 3b-4a Q 2 A 2 REP 1 11d 12c Q 12 50b 62b Q 32 A 1 175d 178a Q 79 A 4 ANS and R P 1 417a-418c Q 84 A 5 446c-447c Q 86 A 4 REP 2 463d 464d Q 105 A 3 540c 541b
20 AQUINAS *Summa Theologica* PART I II QQ 68 69 87c 101c Q 109 A 1 338b 339c PART II II QQ 8-9 416d-426c Q 45 598 603c
21 D NTE *D i e Comedy* PARADISE, II [34 45] 108a XIV [34-66] 127b c XIX [40-66] 135c d
25 MONTAIGNE *Essays* 209a c 212a d 238c 239c 267c 268 292a 294b esp 294a b
30 BA ON *Ad ancement f Learning* 17b-c 19b c 39d-40a 41b d 54b 55b 95d 97b
31 D SCARTES *Object ons a d Repli s* 125b 126a 168d 169a
32 M LTON *Paradise Lo t* BK XII [552-587] 331a 332a
33 PASCAL *Pensées* 20 211a 430 435 245a 251a 88 345b
40 GI BON *Decline and Fall* 190d 191a
44 BOSWELL *Johns n* 394a b 395a b
51 TOLSTOY *War a d Peace* BK I 50b c BK V 196a 198b K XI 525c-d
52 DOSTO VSKY *B thers Ka ama ov* BK I 13c d BK V I 189a 191a c esp 191a,c

6 The refl xiv ty of m nd the m nd s knowl edge of it elf and ts acts

7 PLATO *Charm de* 8b 9d
8 ARISTOTL *M t phys* BK XII CH 7 [1072^b13 29] 602d 603a CH 9 [1074^b35 1075 4] 605c / *Soul* BK III CH 4 [429^b5-9] 661d [429 25 430^a9] 662b-c CH 6 [430^b21-26] 663b / *Memory and Rem sce ce* CH 2 [452^b 3 28] 694d 695a
9 ARISTOTL *Ethics* K IX CH 9 [1170^a28-^{b}1] 424a

(6 *Tb reflexi ty of m nd the m nd s knowl dge of ts lf and ts acts*)

12 EPICTETUS *Di cou s s* BK I CH I 105a b CH 17 122d 124a CH 20 126c d

12 AURELIUS *Meditations* BK XI SECT I 302a b

17 PLOTINUS *Th d Ennead* TR IX CH 3 137 d / *F fth Ennead* TR III CH I-6 215d 219b

18 AUGUSTINE *C ty of God* BK XI H 26 336d 337b

19 AQUINAS *Summa Theolog ca* PART I Q 4 A 2 RE I 3 76d 77d Q 16 A 2 95c 96b Q 28 A 4 REP 2 160c 161d Q 56 A I ANS 292a d Q 85 A 2 ANS and REP I 453d 455b Q 86 A I REP 3 461c-462a Q 87 464d-468d Q 88 A 2 REP 3 471c 472c Q 89 A 2 ANS 475a d PART I II Q 17 A 6 690b d

21 DANTE *D ne Com dy* PURGATORY XVIII [49-60] 80b c

31 DE CARTES *Di cou s* PART IV 51d 52a / *M d tat on* II 77d 81d esp 77d 79a VI 96d 97a / *Obj ct n and R pl s* 162b 207b 209d 210b 276b c

31 SPINOZA *Eth cs* ART II PROP 21 SCHOL 383a PROP 23 383b c PROP 27 29 384b 385a

35 LOCKE *Human Understand ng* 87d NTRO 93a 95d BK I CH SECT I 8 121a 123a SECT 0 123b d SECT 24 127b c CH VI 131b CH IX SECT 2 138b c CH XI SECT 14 146d CH XIV SECT 4 155d 156a c XIX 175b 176b CH XXI SECT 30 185a c C I XXIII SECT I 204a b SECT 5 205a b SECT 15 208c d SECT 32 212c d

35 HUME *Human Under tand ng* SECT I DIV 7-9 453c-455a passim

38 ROUSSEAU *Inequ lity* 349b c

41 GIBBON *D l n and Fall* 150c

42 KANT *Pu e Reason* 15d 16c 31a 32c 49c 51d 55a 56c 99a 101b 120c 129c esp 121a 123b 126a 128b 200 204c / *Fund P n Met physic of Mo als* 271a-c 281c 282d / *P act cal R a on* 292a c 307d 310c 337a b / *Judgement* 600c d

46 HEGEL *Ph l phy of R ght* PART II par 38 48c d / *Ph los phy of H st y* NTRO 160c 161a 165a b P RT 257d 258a PART II 259a b PART I I 306a b

52 DOSTOEV KY *B other K amaz v* K XI 341c

53 JA IES *P y h l gy* 121a b 122b 126a 177a 178a 191a b 196a 197a 222b 224a 685a 686a

54 FREUD *Interp etat n f D eams* 180b 181b 383b-c / *Na cis sm* 408c 409a / *Unco sc ou* 429 -430c

7 The nature and ph ses of co nsciousness the realm of the uncon ciou

53 JAMES *P y h logy* 43a-44 90b 93a esp 92b 98a 115a esp 107b 114b 145a 167a esp 154a 155b 157b 161a 165a 167a

54 FREUD *I terp etat n f D am* 197d 198a 367b-c 382 385c esp 384a 385c / *Uncon sc us* 428a 443d esp 428b-429b 430d-431d 436b-437a 438c d 439d 442b-443a / *Gene l Int oduction* 452a c 531d 532c esp 532b 566c 567b / *Beyond the Plea u e Princpl* 646b 647c / *Ego and Id* 697b 702c esp 697b 698d, 700a 701d / *W a and Death* 760a b / *Civil a tion and Its Discontents* 769a 770c / *New Int oducto y Lectures* 834d 838c esp 836b 837d

7a The nature of self consciousness

31 DESCARTES *Discours* PART IV 51d 52a / *Meditations* II 77d 79a

35 LOCKE *Human Unde tand ng* K II CH XXVII SECT 9-26 222a 227d passim BK I CH IX SECT 2-3 349a c

42 KANT *Pu e Reason* 121a 123b / *P actic l Reason* 292d [fn I]

46 HEGEL *Philosophy of R ght* P RT II par 13 140 48a 50a / *Philosophy of H story* INTRO 160c 161a 165a b

49 DARWIN *Descent of Man* 297a c

51 TOLSTOY *W ar and Pea e* EPILOGUE II 688a 689b

53 JAME *P ychology* 147a 149a 188a 197a esp 191a 197a 204b 259b esp 205a 206a 213a 240a 471b-472b 685a 686a

54 FREUD *Civil ation and Its D contents* 767d 768d

7b The degrees or states of conscious ess wak ng dreaming sleeping

7 PLATO *Rep bl c* BK V 370d 371b BK IX 416a c

8 ARISTOTLE *Phys s* BK VII CH 3 [47^b13 248 6] 330c d / *Met phy cs* BK XII CH 7 [1072^b13-29] 602d 603a / *Soul* BK II CH I [412 22 28] 642b / *Sleep* CH I [454 -6] 696b c [454^b23 27] 697b CH 2 [455^a3 13] 698a b [456 26-29] 699a CH 3 [456^b9-1] 699c / *Dream* C I I 702a 703a CH 3 [46 $^b28$ 461 8] 704d 705a [461 31 $^b11$] 705c [462 15 3] 706b d

12 LUCRETIUS *Natu e f Th gs* BK IV [749-776] 54a b [9 7 1036] 56a 57c

19 AQUINA *Summa Th ol g ca* PART I Q 84 A 8 CONTRARY and REP 2 450b-451b Q 86 A 4 REP 2 463d 464d

20 AQUINA *Summa Theol g ca* PART III SUPPL Q 82 A 3 ANS 971a 972d

23 HOBBES *Le athan* P RT I 50d 51d

25 MONTAIGNE *E ays* 176c 180b 290b c

31 DESC RTES *Di co rse* PART IV 51 53c 54b / *M d tat ons* I 75d 76b VI 103b d / *Obj c t ons and Repl s* 162b

31 SPINOZA *Eth s* PART II PROP 49 C L 393b-c

32 MILTON *Pa ad L st* BK V [28 128] 176a 178a esp [100-109] 177b

35 LOCKE *H man Und stand ng* BK I CI I SECT 10-19 123b 126c CH XIX 175b 176b

46 HE EL *Ph lo phy of H tor* P RT I 220c 221a

48 MELVILLE *Moby D ck* 19 20a 115b 117a 149a 150a 313a b

51 TOLSTOY *War and Peace* BK III 147c 148c BK XI 481a 482b 524c 527a BK XIII 583d BK XIV 601c 602d
52 DOSTOEVSKY *Brothers Karamazov* BK XI 337a 346a
53 JAMES *Psychology* 98a 103b 107a 114b esp 108b 109b 130a 139a esp 130a 132a 137a 139a 154a b 261a 262a 643b [fn 1] 836a 850 passim esp 839b 840b
54 FREUD *Interpretation of Dreams* 137a 176d passim esp 149c 153c, 157a 164d 169b 174d 229d 230a 234b-235c 314c 320c esp 315b 319c 320b 332a 340a esp 336d 340a 352d 357c esp 353d 354a 357a 358d 359d 366d 370a esp 367c d 373a 377b / *Narcissism* 408d-409a / *General Introduction* 477d 483d esp 478b d 485a-486a 518c 519 esp 519b 535a c 537a 539b esp 538d 539a 617b c / *Ego and Id* 703b / *New Introductory Lectures* 811d 812

7c The conscious pre conscious and unconscious activities of mind

53 JAMES *Psychology* 8b 9a 74b 78b 107a 114b 295b 298a 774a 849a b
54 FREUD *Origin and Development of Psycho Analysis* 5b c / *Hysteria* 110b c / *Interpretation of Dreams* 348a c 352d 353b 367b d 369a 370d 377c 385 passim esp 382 383c, 384a 385 / *Repression* 422a-425b / *Unconscious* 430d-443d esp 433b c 436b-437c 438b-439b / *General Introduction* 452a c 453b-476a c passim esp 455b 473b-475a 484a-491b esp 485a 486a 489d 499b 504d esp 502d 504d 512b 531d 532 537a 539b esp 537b-c 538d 539b 558d 568 esp 558d 561b 566a 567d 586b d / *Ego and Id* 697d 701d 703a c / *New Introductory Lectures* 835 839b esp 835 836d

8 The pathology of mind the loss or abeyance of reason

5 AESCHYLUS *Choephoroe* [1021 1064] 80a c
5 SOPHOCLES *Ajax* 143a 155a c esp [28 345] 145d 146b
5 EURIPIDES *Bacchantes* 340a 352a c esp [847-1297] 347b-351a / *Heracles Mad* [815 1145] 371d 374d / *Orestes* [43] 394a 398b
9 ARISTOTLE *Ethics* BK VII CH 5 399 d passim
13 VIRGIL *Aeneid* BK VI [3 3-405] 245a 247b
19 AQUINAS *Summa Theologica* PART I Q 84 A 7 ANS 449b-450b Q 5 A 5 REP I 590d 591c PART I II Q 6 A 7 REP 3 650a d Q 4 A ANS 727d 728c Q 8 A 3 ANS and REP I 742a d Q 37 A 4 REP 3 785d 786d Q 48 AA 3 4 824 826
20 AQUINAS *Summa Theologica* PART I II Q 74 5 R 131d 132b
21 DANTE *Divine Comedy* HELL, XXX [1 33] 44c d
27 SHAKESPEARE *Hamlet* ACT V C V 59 62 ACT V SC II [236-255] 70b / *King Lear* ACT SC IV [74 289] 261 d ACT III SC V 264a 266b ACT IV SC IV [1 20] 272b c SC VI [80-294] 274b 276c SC VII [14-82] 276d 277c / *Macbeth* ACT V SC I 306b 307a SC III [37 46] 308a
31 DESCARTES *Meditations* I 75d
31 SPINOZA *Ethics* PART IV PROP 44 SCHOL 437d-438a
48 MELVILLE *Moby Dick* 148b 150 306a 307a
51 TOLSTOY *War and Peace* BK XI 513d 515a 524c 527a
53 JAMES *Psychology* 241b 258b 818b 819a
54 FREUD *Hysteria* 86a d 90a b / *Interpretation of Dreams* 174d 176d 364c d / *War and Death* 760b / *New Introductory Lectures* 830d 831a

8a The distinction between sanity and madness the criterion of lucidity or insight

6 HERODOTUS *History* BK II 96b 98a
10 HIPPOCRATES *Sacred Disease* 159a b
19 AQUINAS *Summa Theologica* PART I II Q 10 A 3 ANS and REP 2 664d 665c
23 HOBBES *Leviathan* PART I 67b 67d 68b c 69a
25 MONTAIGNE *Essays* 166a 167a 235b c
26 SHAKESPEARE *Midsummer Night's Dream* ACT V SC I [1 27] 370d 371a
27 SHAKESPEARE *Hamlet* ACT II SC II [171-22] 42b-d ACT II SC IV [137 44] 56a ACT IV SC V [1 75] 59c 60b [154 00] 61b d / *King Lear* ACT IV SC VI [14-82] 276d 277c
35 LOCKE *Human Understanding* BK II CH XI SECT 13 146b c CH XXXIII SECT 3 4 248 d
35 HUME *Human Understanding* SECT I DIV II 455b c
43 MILL *Liberty* 299d 300b [fn 1]
44 BOSWELL *Johnson* 13c 14a 111d 354 355a
48 MELVILLE *Moby Dick* esp 122b 123b 135 138a
51 TOLSTOY *War and Peace* BK XI 525c
52 DOSTOEVSKY *Brothers Karamazov* BK XI 337a 348d passim BK X 356d-359 364d 365d
53 JAMES *Psychology* 137a 241b 244a esp 244a 749a 750b esp 750b 799a 806b esp 799a 800a 806a b
54 FREUD *Hysteria* 86c / *Interpretation of Dreams* 364c d / *Narcissism* 399b d / *Unconscious* 433b c 440a 442b / *New Introductory Lectures* 812a b

8b The causes of mental pathology organic and functional factors

6 HERODOTUS *History* BK II 86b BK VI 199c d 201b c
7 PLATO *Timaeus* 474b d
8 ARISTOTLE *Categories* CH 8 [9ᵇ34 1] 15a / *Physics* BK V CH 3 [24ᵇ3-48 6] 330 d / *Soul* BK III CH 3 [4 9 4-8] 661b / *Dreams* CH [460ᵃ32 6] 704b-
9 ARISTOTLE *Parts of Animals* BK I CH 7 [653ᵇ 7] 178d 179a
10 HIPPOCRATES *Sacred Disease* 154a 160d esp 155d 156a 159a b

(8 *The pathology of m nd th loss or abeyance of rea on 8b Th caus s of mental pathol ogy organic and functio al factors*)

19 AQUINAS *Summa Theolog ca* PART I Q 84 A 7 ANS 449b-450b Q 115 A 5 REL 1 590d 591c PART I II Q 6 A 7 REP 3 650a d Q 10 A 3 ANS and REP 2 664d 665c Q 28 A 3 ANS and REP 1 742a d Q 37 A 4 REP 3 785d 786d Q 48 AA 3 4 824c 826a c
23 HOBBES *Leviathan* PART I 68b 71b
27 SHAKESPEARE *King Lear* ACT II SC IV [106-113] 259c
28 HARVEY *On Animal Generation* 347c
30 BACON *Ad a cement of Learn ng* 49d 50b
31 DESCARTES *Obj ctions and Repli s* 155d 156a
40 GIBBON *Decline and Fall* 598a b
44 BOSWELL *Johnson* 127a b 355a 356b
48 MELVILLE *Moby Dick* 135a 136b
49 D RWIN *D s ent of Man* 299 318b
51 TOLSTOY *War and Peace* BK XV 616a 617a
52 DOSTOEVSKY *Brothers Ka an a ov* BK I 4c d BK II 21d 22b BK III 62d 63b BK XI 337a 348d pass m BK XII 376a d
53 JAMES *Psychology* 3a 25b 26b 32a 37b passim 40b 41a 258a b 533a 538b
54 FREUD *Hysteria* 81c 87a 97b 106c / *In er pretat on of D eams* 176a d 380d 382a esp 381d-38 a / *General Int oducti n* 451d-452a 547b-549d 616d-623b pas m 6 7a b / *G oup Psychology* 690c 691c / *Ego and Id* 716d 717a / *Ci il ation and Its Di cont nt* 774c d / *N w In oductory Lectu r s* 812a 866c 867a 872b d

8c The abnormality peculiar to mind sys tematic delusion

29 CERVANTES *Don Qu x te* esp PART I 1a 3b 50b 52d PART I 205a 209d
35 LOCKE *Human Under tand ng* BK II CH XI SECT 13 146b c
44 BOSWELL *John on* 13c 14a
48 MELVILLE *Moby D k* 232b 236a
51 TOLSTOY *War and Pea* BK X 391d 394d BK XI 510b d 515a 517a 525c
52 DO TOEVSKY *B hers Ka ama o* BK X 337a 346a passim
53 JAMES *Psychology* 242a 244b 527b 528b [fn 3] 818b 819a
54 FREUD *Hyster* 86a d 102a 106c / *Na cis sm* 408a d / *General Int oduction* 547b-550c 620c 622a esp 620c d / *Civil at on and It D scontent* 774 d

9 Mind in the moral and pol tical order

9a The distinct on between the speculative and practical intellect or reason the spheres of knowledge bel ef and act on

8 ARISTOTLE *Metaphy ics* BK II CH [993b20-23] 512a / *Soul* BK I CH 3 [407a22 30] 636d 637a BK III CH 7 663c 664b CH 9 [432b26-433a6] 665c
9 ARISTOTLE *Motion of An mals* CH [01b-3] 236b d / *Eth cs* BK VI 387a 394d pas m, esp CH I [1139 3]-CH 2 [1139b13] 387b-388b CH 5 389a c CH 7 390a d CH 8 [1142 11 19] 391b / *Pol t cs* BK VII CH 14 [1333 16-29] 538a
19 AQUINAS *Summa Th ologica* PART I Q 79 AA 11-12 424d 426b Q 86 A 1 REP 2 461c 462a PART I II Q 3 A 5 626b 627a Q 9 A 1 REP 2 657d 658d Q 38 A 4 REP 2 3 788d 789b
20 AQUINAS *Summa Theologica* PART I II Q 5 A 5 REP 3 39a-40a Q 94 A 4 ANS 223d 224d PART I II Q 8 A 3 418c-419a Q 9 A 3 425b d Q 45 A 3 600c-601a PART III Q 13 A 1 REP 3 780a 781b
30 BACON *Advancement of Learning* 16d 17a 18a b 42a c 55b-d 65d 66a 86b-c / *Novum Organum* BK II APH 4 137d 138b
31 DESCARTES *Objections and Replie* 126a b 243c d
33 PAS L *Pensées* 265 90 221b-225a
35 LOCKE *Human Unders and ng* INTRO SECT 5-6 94b 95a BK IV CH XI SECT 8 356b-d CH XIV 364b 365a
35 BERKELEY *Human Knowledge* INTRO SECT 2 405b
35 HUME *Human Under tanding* SECT V DIV 34 464b SECT XII DIV 126-1 5 507a 508a
42 KANT *Pure R a on* 190 191a 240b-243c / *Fund Prin Metaph sic of Mo als* 253a 255d 260d 261b 264b-d 271a c 283d 28 d / *P acti al Reason* 291a 297c 300d [fn 1] 30 d 314d esp 310d 311d 319 321b 329a 337a c esp 329a-330c 343a d / *Intro Metaphy ic of Mo als* 388a d 390b d 391a / *Judgement* 461a 475d esp 463a 467a 474b 475d 523d 524a 596c 598b 599d 607c
43 MILL *R presenta ive Go ernment* 346c 34 a
46 HEGEL *Ph l sophy of R ght* PREF 6a 7 ADDITIONS 1 115a d 4 116a d / *Ph l sophy of H story* PART IV 360d 361a 362d
47 GOETHE *Fau t* PART I [1224 123] 30b
51 TOL TOY *W a and Peace* BK I 15a b A b-c BK IX 361d 365c
53 JAMES *Psychology* 655a 661a passim, esp 656b 729a 730a 865b

9b The rel tion of reason to will des re and emotion

5 SOPHOCLES *O d pus at Col nus* [658-660] 120c
5 EURIPIDES *Hippolytus* [373 430] 228b-d
7 PLATO *Phaedrus* 120a c 128a 129d / *Phi d* 224a 226c 230d 234c / *Gorgia* 275b 280d / *Republic* BK IV 346a 355a BK IX 425c-427b / *Timaeus* 466a-467b
8 AR STOTLE *T p c* BK V CH 1 [129a10-16] 179a / *M t phys* BK IX CH 5 57 A c CH 7 [1049a5 12] 574c d / *Soul* BK I CH 3 [407a34 b4] 637a BK III CH 10 665d 666d
9 ARISTOTLE *Motion of An mals* CH 7 236b 237b / *Ethics* BK I CH 13 [1102b13 1103a10]

9d Reason as the principle of free will rationality as the source of moral and political freedom

31b c PART III par 187 65a c ADDITIONS 24 120d 121a / *Philosophy of Histor* INTRO 158c d 160c 162a 168b d 170c 171c PART II 311b d PART IV 316d 317a 350b c 353c d 359b 360c 361a 364d

51 TOLSTOY *W r and Peace* EPILOGUE II 688a 690a

53 JAMES *Psych log* 706b

9e Reason as formative of human society the a thority of go ernment and law

7 PLATO *Republ c* 295a 441a c esp BK IV 350b 354b / *Laws* 640a 799a c esp BK I 650a b BK III 669b 670c BK IV 681b 682c BK IX 754a b

9 ARIS OTLE *Ethics* BK V C I 6 [1134 35 b1] 382b / *P l tics* BK I C I 2 [1 52b27 1 53 38] 446a d BK VII III 527a 548a c

12 AURELIUS *Medit t s* BK II SECT 4 260b 261a BK IV SECT 4 264a SECT 24 265c d BK X S T 9 292b d K XI S CT I 302a b

14 PLUT CH *Aemiliu Paulus* 217d 218a / *Phocion* 604b d 605d

19 AQUIN S *Summ Th ol gica* PART I Q 21 A 2 REP I 125c d

20 AQ INAS *S mma Th l g a* PART I II Q 90 A I 205b 206b Q 97 A ANS and R P I 236a d

23 HO BES *Leviath n* PART I 54c 86b 87b 91b 92b 96b PART II 100a 132 b

30 BACON *Ad eme t of Learn g* 20c d

31 S INOZA *Ethics* PART IV PROP 35 37 433b 436a P 4 437a PROP 73 446c 447a A P NDIX XI XVI 448b-449c

35 LO KE *C vil Governm t* CH II 25d 28 pas im esp SECT 6 26b CT 9-10 27 b

38 M NTESQUIEU *Sp r t f Laws* BK I 1d 2 2d 3

38 ROUSSE U *Social Contract* BK I 393b c BK II 400 c

42 K NT *I t o M taphys c of M ls* 389a b / *Sc en e f Right* 397a 399a 416b-417a

43 F RALI T NU IB R 49 161a

43 MILL *Repr sentati e G ernment* 327b d 332d pass m / *Util a sm* 469c d

46 HE L *Philosophy of Right* PREF 6a 7a PART I par 187 65a p r 2 70d 71a par 258 81 82d [fn 1] p r 272 89d 90c A DITI NS 47 124a b 57 142b 64 144c 145a 184 149a / *Phil sophy f H tory* N RO 170c 178a P T II 311b d ART IV 316d 317a 350b 353 d 364a

49 DA W N *Des ent of M n* 318c d 322a

54 FREU *New Intr ductory Lectures* 880a b

9f The lif of reason or th life of the mind s man s high st voc t on reason as th p i c ple of all hum n wo k

7 PLATO *Ph d us* 124b 126 / *Sympos um* 167 d / *Ph edo* 224a 225c / *R public* BK VI 380d 381 BK VII 388 401d / *T m us* 475d-476b / *Thea t t s* 528 531a / *Philebus* 609a 639a c esp 633a 639a c / *Laws* BK V 690a c / *Seventh Letter* 808 809a

8 ARISTOTLE *Met physics* BK I C I I 499a 501c K XII CH 7 [1072b14 29] 602d 603a

9 ARISTOTLE *Ethics* BK I CH 5 [1095b16-18] 340d CH 7 [1097b23 1098 18] 343a c CH 8 [1098b9-1099 6] 344a c BK VI CH 12 [144 1-6] 393c BK X CH 7-8 431d 434a / *Politics* BK VII CH 3 [1325b14 32] 529d 530a CH 4 [1333 17-29] 538a

12 LUCR TIUS *N t e of Thi gs* BK II [1-61] 15a d BK III [-93] 30a 31b [307 322] 34a b [1053 1075] 43c d BK V [1-54] 61a d [1113-1135] 75c d BK VI [1-42] 80a d

12 EPICTETUS *Discourses* BK I CH 2 106d K II CH II 150a 151b CH 17 158d 161a BK III CH 0 185d 187a CH 5 190a 191a CH 19 192c d CH 22 195a 201a BK IV CH 4-6 225a 232 CH 8 235b 237d

12 AURELIUS *Meditations* K I SECT 16- 7 259a d BK III SECT 4 260b 261a SECT 6 261a c SECT 8 12 261d 262c BK IV S CT 3 263b 264a ECT 16 264d BK V SECT 9 270b c S CT 6 271 d BK VI SE T 2 274c K IX SECT 41 295c BK X S CT 12 298c d

17 P O I US *F st Ennead* TR IV CH 2 4 12d 14c / *Th d E ne d* TR VIII CH 4 130d 131a H 6 131d 132b

18 AUGUSTINE *City of God* K XIX CH 19 523b-d

19 AQU NA *Summa Theol gica* PART I Q 12 A 8 REP 4 57b 58b Q 26 A 2 ANS and R P 2 150 151a Q 88 A AN 469a 471c PART I II Q A I RE 3 609b 610b Q 3 A 3 8 624b 629c Q 21 A RE 2 718 d

20 AQUINA *S mma Theolog a* PART I II Q 66 A 5 R P I 2 79b 80

22 CHAUC R *P ologue* [85 308] 164 b

25 MONTA GN *Ess ys* 231d 238 395d

27 SHAKES EARE *Pericles* ACT III SC II [26-42] 434d 435a

30 BACON *Ad a ement of Lear ng* 18a b 27b d 69d 76a passim esp 70b d 71b c 72b c 73d 74a

31 DESCART S *Rules* 1d / *Discourse* ART I 41d 42a PART II 49d 50b

31 SPINOZ *Eth s* P RT I PROP 6-28 431a APP ND X IV 447b c X 448a XXXII 450c d PART V PRO 4 4 458d-462d

33 PASCAL *Pens es* 346-348 233b 234a

35 HU IE *Hu ian Underst di g* S T I DIV 5 452d 453b

36 SWI T *G ll ver* PART II 94b 99b

40 G ON *D l and F ll* 645 d

42 KAN *Fund Pr n M t phy ic of Mo ls* 256d 257d 268 270 p 269 / *P ct cal Reason* 337 338 / *Judgement* 508c 509a 591b 592a 596 597d

43 MILL *Util t a sm* 448b-450 451 d

46 H G *Phil phy of Hist ry* T 350b

47 GO TH *F ust* PART I [354-517] 11a 14b [1194 1201] 29b

(9 *Mind in the moral and political order* 9f *The life of reason or the life of the mind as man's highest vocation reason as the principle of all human work*)

48 MELVILLE *Moby Dick* 255a
54 FREUD *Civilization and Its Discontents* 779d-780b

10 The existence of mind apart from man

10a The indwelling reason in the order of nature

12 AURELIUS *Meditations* 253a 310d esp BK II SECT 4 257b BK III SECT 13 262c BK IV SECT 10 264c SECT 40 267a b SECT 45 46 267b c BK V SECT 8 269d 270b SECT 30 273a BK VI SECT 1 274a SECT 9-1 274b c SECT 36 277c, SECT 38 277c d SECT 4 277d SECT 42 44 278a c, SECT 58 279d BK VII SECT 9-11 280b c SECT 75 285c BK VIII SECT 7 286a SECT 34 288a b BK X SECT 6-7 297a c BK XII SECT 5 307d 308a SECT 30 310a b

10b *Nous* or the intellectual principle its relation to the One and to the world soul

7 PLATO *Cratylus* 93c 101d 102a / *Phaedrus* 136b / *Phaedo* 240d 242b / *Timaeus* 455a 456a / *Sophist* 567a 569a / *Philebus* 618b 619d
8 ARISTOTLE *Physics* BK I CH 4 [188 5 12] 263b BK II CH 4 [203 23 33] 281a b BK VIII CH 1 [250b23 26] 334b CH 5 [256b20-27] 341d / *Metaphysics* BK I CH 3 [984b8 22] 502d CH 7 [988b6-16] 506c d CH 8 [989 30-b2] 507c d
13 VIRGIL *Georgics* IV [219 227] 89b / *Aeneid* BK VI [724 734] 230b
17 PLOTINUS *Second Ennead* TR IX CH 1 66a d / *Third Ennead* TR VIII C 1 TR IX CH 1 129a 136d / *Fourth Ennead* TR IV CH 16 165d 166b / *Fifth Ennead* 208a 251d esp TR I CH 3 7 209b 212c TR III CH 1 12 215d 223c C 16 225b 226a TR IV CH 2 TR V CH 3 227b 230a TR V CH 7 231d 232b 1 12 234c TR VII 238a 239b TR IX CH 3-9 247b-250b / *Sixth Ennead* TR II CH 20-21 278d 280a TR VII CH 13 24 328b 334a CH 36-42 339c 342d TR VIII CH 17 18 351c 352c
46 HEGEL *Philosophy of History* INTRO 158a c PART IV 364b c
53 JAMES *Psychology* 222b 223a

10c The realm of the pure intelligences the angelic intellect

8 ARISTOTLE *Metaphysics* BK XII CH 8 603b-605a esp [1073 36 39] 603d
16 KEPLER *Epitome* BK IV 890a 895b esp 890b-893b 897a 914a b 930b 932a 933a / *Harmonies of the World* 1080b 1085b
17 PLOTINUS *Third Ennead* TR V CH 6 103b-104a
18 AUGUSTINE *Confessions* BK XII par 101d 102a par 16 102d 10 a par 20 103c / *City of God* BK X CH 2 299d 300a BK XX CH 1 586b d 587b CH 29 614b-d
19 AQUINAS *Summa Theologica* PART I Q A ANS and REP 2 31d 32c Q 10 A 3 ANS 4 43b Q A 4 REP 53b 54c Q 50 269a 275a esp A 1 ANS 269b 270a A 2 ANS 270a 272a A 5 ANS 274b 275a Q 54 284d 288d Q 55 A 2 ANS 289d 290d Q 56 A 2 ANS 292d 294a Q 57 A 1 ANS 295a d A 3 A 1 and REP 2 297b 298a Q 58 A 1 ANS 300c 301a A 3 ANS 301d 302d Q 61 A 2 REP 3 315c 316a Q 64 A 1 ANS 334a-335c Q 65 A 4 ANS 342b 343c Q 5 A 7 REP 2-3 384d 385c Q 79 A 1 REP 3 414a d A 2 ANS 414d 416a A 8 ANS 421c-422b A 10 ANS 423d 424d Q 84 A 2 ANS 442b-443c A 3 REP 1 443d-444d A 7 ANS 449b 450b Q 85 A 1 ANS 451c-45 c A 5 ANS 457d 458d Q 8 A 1 ANS and REP 2-3 465a 466c A 3 ANS 46 b-468a Q 89 A 3 ANS and REP 1 475d 4 6c A 4 ANS 476c-477a
20 AQUINAS *Summa Theologica* PART I II Q 50 A 6 ANS and REP 1 11a 12a Q 51 A 1 REP 2 12b 13c
21 DANTE *Divine Comedy* HELL, VII [6-96] 10b c PARADISE I [103 126] 107b c II [112 138] 109a VIII [97 114] 118a XIII [52 2] 1 6a XXVIII 148d 150b XXIX [3, 45] 150c [67-85] 151a
30 BACON *Novum Organum* BK II AP 15 149a
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33 PASCAL *Pensées* 283 224a
35 LOCKE *Human Understanding* BK II CH X SECT 9 143a BK III CH VI SECT 1 272 BK IV CH III SECT 6 315a b SECT 23 320a-c SECT 27 321d 322a CH XVI SECT 12 371a
35 BERKELEY *Human Knowledge* SECT 81 4 8c d

10d The unity and separate existence of the active or the possible intellect

8 ARISTOTLE *Soul* BK III CH 5 esp [430a18 2] 662c d
19 AQUINAS *Summa Theologica* PART I Q 6, A 2 388c 391a Q 9 A 4-5 417a-419b Q 84 A 4 ANS and REP 3 444d-446b Q 88 1 ANS and REP 1 469a-471c Q 11 A 1 5 595d 597c
20 AQUINAS *Summa Theologica* PART I II Q 50, A 4 ANS 9a 10b

10e Mind as an immediate infinite mode of God

31 SPINOZA *Ethics* PART I PROP 14 COR 1 1 2 360a PROP 21 23 364a 36 a PROP 9-31 366b 367a esp PROP 31 DEMONST 366d PART II PROP 1 SCHOL 374a PROP 5 7 374c 375c PROP 10-11 376c 37 c

10f Absolute mind the moments of its manifestations

46 HEGEL *Philosophy of Right* INTRO par 24 17d 18a par 27 18d par 29–30 19a-c par 33 20b-d PART I par 35 21a b PART III par 156–157 57d par 59 82a par 262 83d 84a par 321 106c d par 340–360 110b 114a c ADDITIONS 100 133a 153 141d 194 150c d / *Philosophy of History* INTRO 156d 157b 160b 162a 163a 169d 170b 177d 178d 179b-d 182d 183a 186c 188b 189d 190b

10f(1) The unfolding of mind or spirit in world history

46 HEGEL *Philosophy of Right* PART III par 340–360 110b 114a c ADDITION 153 141d / *Philosophy of History* 153a 369a c esp INTRO 153a 190b 203a 206a c PART IV 368d 369a c

10f(2) The concrete objectification of mind in the state

46 HEGEL *Philosophy of Right* PART III par 56–57 57d par 257 259 80b 82a par 270 84d 89 par 274 92a par 289 97b-d par 36 113d 114a ADDITIONS 52 141 d 157 142b-c 164 144c d / *Philosophy of History* INTRO 170 176b PART I 230a

10g The divine intellect its relation to the divine being and the divine will

8 ARISTOTLE *Metaphysics* BK XII CH 7 [1072b 14 9] 602d 603a CH 9 605a d

9 ARISTOTLE *Ethics* BK X CH 8 [1178b8–23] 433b

12 EPICTETUS *Discourses* BK I CH 8 146a

17 PLOTINUS *Second Ennead* TR IX CH I 65d 66d

18 AUGUSTINE *Confessions* BK XIII par 12 113b-d / *City of God* BK VIII CH 6 268d 269c BK XI CH 21 333a d BK XII CH 17–18 353a 354d CH 23 357d 358a

19 AQUINAS *Summa Theologica* PART I Q 3 A I REP 3 14b-15b Q 14 AA I 4 75d 79a esp A 4 78b 79a A 8 ANS 82c 83b Q 16 A 5 REP I 97c 98b Q 18 AA 3 4 106b-108c Q 19 A I ANS 108d 109c A 3 REP 6 110b 111c A 4 ANS 111c 112c Q 26 A 2 150c 151a Q 46 A REP 3 253a 255a Q 50 A I ANS 269b 270a Q 54 A 2 ANS 285d 286c Q 55 A ANS 289a d A 3 ANS and REP I 291a d Q 59 A 2 ANS 307c 308b Q 79 A I ANS 414 d A 2 ANS 414d-416a A 4 ANS and REP I 5 417a 418c A 5 REP 3 418c-419b A 10 REP 2 423d-424d Q 84 A 2 ANS 442b-443c A 4 REP I 444d-446b A 5 446c 447c Q 85 A 4 ANS 457a d A 5 ANS 457d 458d Q 87 A I ANS 465a-466c A 3 ANS 467b 468a Q 89 A I ANS and REP 3 4 3b-475a A 4 ANS 476c 477a Q 93 AA 6–8 496b 500c Q I 5 A 3 540c 541b PART I II Q I A 4 REP I 612a 613a Q 5 A 6 REP 2 641a 642a Q 19 A 4 705b-c Q 40 A 3 REP I 794c 795a Q 46 A 4 REP 2 815b d

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21 DANTE *Divine Comedy* PARADISE XV [37–84] 128d 129b XXXIII [82 145] 157a d

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I Works by authors represented in this collection

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Chapter 59 MONARCHY

INTRODUCTION

OF all the traditionally recognized forms of government monarchy is the easiest to define and to identify As the word indicates it is government by one man It is indifferent whether that man is called king or prince Caesar or Czar Of all such titles king is the most frequent and in consequence monarchy is often called kingship or referred to as the royal form of government

When monarchy is thus defined in terms of the principle of *unity* other forms of govern ment such as aristocracy or oligarchy and de mocracy tend to be characterized as govern ment by the few or the many But the numeri cal criterion by itself is obviously inad quate To those who distinguish between aristocracy and oligarchy it makes a difference whether the few who rule are selected for their pre emi nence in virtue or in wealth A tyranny like a monarchy may be government by one man Hence those who wish to use the word mon arch or king eulogistically cannot be satis fied with a definition that fails to distinguish between king and tyrant

It has been said—by Aristotle for example—that the perversion of or deviation from monarchy is tyranny for both are forms of one man rule But he adds there is the greatest difference between them the tyrant looks to his own advantage the king to that of his sub jects Both Aristotle and Plato also say that as tyranny is the worst form of government so monarchy at the opposite extreme is the best But though in their opinion tyranny is *always* the worst form of government Aristotle at least does not seem to think that monarchy is always—*under all condit ons*—best

Further complications appear when other views are taken into consideration The chap ters on CITIZEN CONSTITUTION and GOVERN MENT discuss the basic opposition between ab solute and limited government in th various terms in which that opposition is traditionally expressed royal as opposed to political, des potic as opposed to constitutional government or government by m n as opposed to govern ment by law That opposition seems to be rele vant to the theory of monarchy certainly to any con eption of monarchy which tends to identify it with absolute rule or which sees som affinity between royal and despot c gov ernment

The word despotic is of course some times used in a purely descriptive rather than a disparaging sense Used descriptively it desig nates the absolute rule exercised by the head of a household over children and slaves neither of whom have any voice in their own government Aristotle sometimes characterizes the royal government of a political community as des potic to signify its resemblance to the abso lute rule of the father or master He expresses the same comparison in reverse when he says that the rule of a father over his children is royal

The derogatory sense of despotic would seem to apply to those cases in which grown or free men are ruled as if they were children or free men as if they were slaves The great issue con cerning monarchy therefore is whether royal government is despotic in this sense Al vays or only under certain conditions? And if despot is it also tyrannical? Is monarchy in principle the foe of human liberties? To all these ques tions there are opposite answers in the great books of political theory Where Heg l says that public freedom in general and an hered tary monarchy guarantee each other others like Rousseau and Mill identify the freedom of citizenship with republican or representative government

This central issue is complicated not only by

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This central issue is complicated not only by

form of government The development of the state to constitutional monarchy is the achievement of the modern world He thinks Montesquieu was right in recognizing that the ancient world knew only the patriarchal type of monarchy a kind of transference of familial government to larger communities still organized on the domestic pattern But according to Hegel Montesquieu himself in stressing the role of the nobility shows that he understands not the type of monarchy which is organized into an objective constitution and in which the monarch is the absolute apex of an organically developed state but only feudal monarchy the type in which the relationships recognized in its constitutional law are crystallized into the rights of private property and the privileges of individuals and corporations

It may be questioned however whether Hegel s theory of constitutional monarchy avoids the issue raised by republicans who think that monarchy is inseparable from some form of absolutism or that monarchy if entirely devoid of absolutism has no special character as a form of government In spite of his acceptance of the traditional distinction between constitutional government and despotism Hegel seems to regard the sovereignty of the state as absolute in relation to its own subjects at home—no less absolute than is its sovereignty in external affairs *vis à-vis* foreign states The crown is the personification of the absolute sovereignty of the state at home The absolute power of the state comes into existence only in the person of a monarch who has the final decision in all matters

The sovereignty of the people writes Hegel is one of the confused notions based on the wild idea of the people Taken without its monarchy and the articulation of the whole which is the indispensable and direct concomitant of monarchy the people is a formless mass and no longer a state Hegel thus dismisses the notion of popular sovereignty (which to Rousseau Kant and the Federalists is of the essence of republican government) as inconsistent with the Idea of the state in its full development

A profound opposition therefore exists between Hegel s theory of constitutional monarchy and republican theories of constitutional government Even though the issue cannot be stated in terms of government by men *vs* government by laws a monarchy as opposed to a republic still seems to represent the principle of absolutism in government

THERE IS STILL another conception of a type of government which is neither a pure republic nor an absolute monarchy What the mediaeval writers call a mixed regime is not a constitutional monarchy in the Hegelian sense nor is it what Aristotle means when he uses that term The mediaeval mixed regime is a combination of two distinct principles of government—the *royal principle* according to which absolute power is vested in the sovereign personality of an individual man and the *political principle* according to which the supremacy of law reflects the sovereignty of the people who have the power of making laws either directly or through their representatives

This conception of a mixed regime—of government which is *both royal and political*—appears at first to be self contradictory In Aristotle s terms it would seem impossible to combine the supremacy of law which is the essence of constitutional government with the supremacy of a sovereign person which is the essence of royal government The mixed regime would also seem to be impossible in terms of Hobbes theory of the indivisibility of sovereignty Impossible in theory the mixed regime nevertheless existed as a matter of historic fact in the typical mediaeval kingdom which derived its character from the feudal conditions under which it developed

Does not the fact of its historic existence refute the incompatibility of the principles which the mixed regime combines? The answer may be that like a mixture of oil and water royal and political government can only exist as a mixture in unstable equilibrium Originating under feudal conditions the mixed regime tends toward dissolution as these conditions disappear with the rise of the modern nation state It first tends to be supplanted by a movement toward absolute monarchy Then in the course of reaction and revolution it tends toward constitutional monarchies or republics through added limitations on the power of the throne

These historic developments seem to indicate that the principles of the mixed regime are ulti

ıg to law Of these most clearly exemplified ı the Spartan constitution Aristotle says that the so called limited monarchy or kingship ccording to law is not a distinct form of ;overnment for under all governments as for :xample in a democracy or aristocracy there nay be a general holding office for life and one person is often made supreme over the admin istration of a state

Whether or not there is a supreme command er or a chief magistrate elected or hereditary the government is not distinctively royal if the man called king is subject to the laws and if the other men in the state are not his subjects but his fellow citizens For somewhat different reasons Hobbes agrees with the view that only absolute *monarchy is monarchy When the king is limited in power he says the sovereignty is always in that assembly which had the right* to limit him and by consequence the govern ment is not monarchy but either democracy or aristocracy as of old time in Sparta where the kings had a privilege to lead their armies but the sovereignty was in the *Ephori* Hobbes uses the government of one people over another people—the mother country over colonies or the conqueror over a subjugated nation—to illustrate what he means by absolute monarchy This suggests a significant parallelism between the problems of monarchy and the problems of empire

If there were universal agreement on the point that only absolute monarchy is truly monarchy the issue concerning monarchy could be readily translated into the basic opposition between rule by men and rule by law But such agreement seems to be wanting and the problems of monarchy are in consequence further complicated

Plato for example distinguishes in the *Statesman* between three forms of government according to established laws of which one is monarchy Monarchy is better than aristocracy and democracy obviously not with respect to the principle of the supremacy of law but simply because government by one seems to be more efficient than government by a few or many just as tyranny is the worst form of government because in violating or overthrowing the laws one man can succeed in going further than a multitude which is unable to do either any great good or any great evil

But all these forms of government good and bad better and worse are compared by Plato with a form of government which he says excels them all and is among States what God is among men It seems to be monarchical in type but though not lawless like tyranny it is entirely above the need of written or customary rules of law The best thing of all Plato writes is not that the law should rule but that a man should rule supposing him to have wisdom and royal power Whether such government can ever exist apart from divine rule or perhaps the advent of the philosopher king the point remains that Plato seems to conceive monarchy in two quite distinct ways—both as an absolute rule and also as one of the legally limited forms of government

Montesquieu separates monarchy from absolute government entirely At the same time he distinguishes it from republics whether aristocracies or democracies According to him monarchy is as much a government by law as much opposed to despotism or absolute government as are republics Monarchies and republics are the two main kinds of constitutional government just as aristocracies and democracies are the two main kinds of republic

Where Aristotle holds that constitutional monarchy is not a distinct type of government Montesquieu holds that absolute monarchy does not deserve the name of monarchy but should be called despotism instead He criticizes Aristotle s fivefold classification of kingships saying that among the number of monarchies he [Aristotle] ranks the Persian empire and the kingdom of Sparta But is it not evident he asks that the one was a despotic state and the other a republic? Since Montesquieu s own view of monarchy involves, in addition to a king a body of nobles in whom intermediate and subordinate powers are vested he thinks no true notion of monarchy can be found in the ancient world

Hegel agrees with Montesquieu that constitutional monarchy is the very opposite of despotism but he goes much further than Montesquieu in the direction of identifying monarchy with constitutional government For him constitutional monarchy is the ultimately true

form of government The development of the state to constitutional monarchy is the achievement of the modern world He thinks Montesquieu was right in recognizing that the ancient world knew only the patriarchal type of monarchy a kind of transference of familial government to larger communities still organized on the domestic pattern But according to Hegel Montesquieu himself in stressing the role of the nobility shows that he understands not the type of monarchy which is organized into an objective constitution and in which the monarch is the absolute apex of an organically developed state but only feudal monarchy the type in which the relationships recognized in its constitutional law are crystallized into the rights of private property and the privileges of individuals and corporations

It may be questioned however whether Hegel s theory of constitutional monarchy avoids the issue raised by republicans who think that monarchy is inseparable from some form of absolutism or that monarchy if entirely devoid of absolutism has no special character as a form of government In spite of his acceptance of the traditional distinction between constitutional government and despotism Hegel seems to regard the sovereignty of the state as absolute in relation to its own subjects at home—no less absolute than is its sovereignty in external affairs *vis à vis* fore gn states The crown is the personification of the absolute sovereignty of the state at home The absolute power of the state comes into existence only in the person of a monarch who has the final decision in all matters

The sovere gnty of the people writes Hegel is one of the confused notions based on the wild idea of the people Taken without its monarchy and the articulation of the whole which is the indispensable and direct concomitant of monarchy the people is a formless mass and no longer a state Hegel thus dismisses the notion of popular sovereignty (which to Rousseau Kant and the Federalists is of the essence of republican government) as inconsistent with the Idea of the state in its full development A profound opposit on therefore exists between Hegel s theory of constitutional monarchy and republican theories of constitutional government Even though the issue cannot be stated in terms of government by men *vs* government by laws a monarchy as opposed to a republic still seems to represent the principle of absolutism in government

THERE IS STILL another conception of a type of government which is neither a pure republic nor an absolute monarchy What the mediaeval writers call a mixed regime is not a constitutional monarchy in the Hegelian sense nor is it what Aristotle means when he uses that term The mediaeval mixed regime is a combination of two distinct principles of government—the *royal principle* according to which absolute power is vested in the sovereign personality of an individual man and the *political principle* according to which the supremacy of law reflects the sovereignty of the people who have the power of making laws either directly or through their representatives

This conception of a mixed regime—of government which is *both royal and political*—appears at first to be self contradictory In Aristotle s terms it would seem impossible to combine the supremacy of law which is the essence of constitutional government with the supremacy of a sovereign person which is the essence of royal government The mixed regime would also seem to be impossible in terms of Hobbes theory of the indivisibility of sovereignty Impossible in theory the mixed regime nevertheless existed as a matter of historic fact in the typical mediaeval kingdom which derived its character from the feudal conditions under which it developed

Does not the fact of its historic existence refute the incompatibility of the principles which the mixed regime combines? The answer may be that like a mixture of oil and water royal and political government can only exist as a mixture in unstable equilibrium Originating under feudal condit ons the mixed regime tends toward dissolution as these cond tions disappear with the rise of the modern nation state It first tends to be supplanted by a movement toward absolute monarchy Then in the course of reaction and revolution it tends toward constitutional monarchies or republics through added limitations on the power of th throne

These historic developments seem to indicate that the principles of the mixed regime are ulti

mutually as irreconcilable in fact as they are in theory.

Montesquieu's remark that the ancients "had not a clear idea of monarchy" can be interpreted to mean that they did not have the conception of a mixed regime. Before the accidents of history brought it into existence, it is unlikely that anyone would have conceived of a government both royal and political. Montesquieu does not adopt the mediaeval description of a mixed regime which, as stated by Aquinas, is "partly kingdom, since there is one at the head of all; partly aristocracy, in so far as a number of persons are set in authority; and partly democracy, i.e., government by the people, in so far as the rulers can be chosen by the people, and the people have the right to choose their rulers." Yet Montesquieu's theory of monarchy seems to be determined by characteristics peculiar to the mediaeval kingdom.

This seems to be the point of Hegel's observation, already quoted, that Montesquieu's theory of monarchy identifies it with the feudal kingdom. The point is confirmed in another way by the fact that Montesquieu's ideal of monarchy is the government of England at the end of the 17th century, which he says "may be justly called a republic, disguised under the form of a monarchy." Locke's conception of the English government in his own day tends to clarify this point.

"The form of a government," says Locke, "depends upon the placing of the supreme power, which is the legislative." When the power of making laws is placed in the hands of one man, then it is a monarchy. But according to Locke, "the legislative and executive power are in distinct hands ... in all moderated monarchies and well-framed governments."

What Locke here calls a "moderated monarchy" (intending to describe the government of England) seems to be the mixed regime the form of government which Fortescue had earlier

called a "politi ... om" and Bracton

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absolute monarchy. If on the other hand the king were merely a representative, the government would be a republic.

The sovereign character of the king in a mixed regime seems to stem from his unique relation to the laws of the land. In one way he is above the laws and has certain powers not limited by law; in another way, his whole power is limited by the fact that he does not have the power to make laws in his own right or authority. When a people are free and able to make their own laws, Aquinas writes, "the consent of the whole people expressed by custom counts far more in favor of a particular observance than does the authority of the sovereign, who has not the power to frame laws except as representing the people." But Aquinas also says that the sovereign is "*exempt from the law* as to its coercive power, since, properly speaking, no man is coerced by himself, and law has no coercive power save from the authority of the sovereign."

The coercive power of the law belongs to the sovereign as executive, not legislator. Admitting the king to a share in legislative power, Locke conceives his essential function—that which belongs to him alone—as executive. The absoluteness of this executive power Locke defines in terms of the royal prerogative, that "being nothing but a power in the hands of the prince to provide for the public good in such cases which, depending upon unforeseen and uncertain occurrences, certain and unalterable laws could not safely direct." Prerogative, he then goes on to say, "is the power ... to act according to discretion for the public good without the prescription of law, and sometimes even against it."

Locke thus gives us a picture of the mixed regime in which the king's sovereign power is limited to the exercise of an absolute prerogative in performing the executive functions of government. In the executive sphere the king's power is absolute, yet his sovereignty is not absolute, for in the legislative sphere he either has no voice at all where ancient customs prevail or, in the making of new laws, he can count himself merely as one representative of the people among others.

The extent of the prerogative permitted the king depends upon the extent to which mat

ters are explicitly regulated by law When in the infancy of governments the laws were few in number the government was almost all prerogative as Locke sees it He thinks that they have a very wrong notion of government who say that the people have encroached upon the prerogative when they have got any part of it to be defined by positive laws For in so doing they have not pulled from the prince anything that of right belonged to him but only declared that that power which they indefinitely left in his or his ancestors hands to be exercised for their good was not a thing they intended him when he used it otherwise.

Here we see the seed of conflict between sovereign king and sovereign people in the combination of incompatible principles that constitute a mixed regime As the king jealous of his prerogative tries to maintain or even extend his power royal and political government tends toward absolute monarchy As the people jealous of their sovereignty try to safeguard their legislative power from royal usurpations, the mixed regime tends to dissolve in the other direction This happens as it moves toward republican government through various stages of limited or constitutional monarchy in which the sovereignty of the king becomes more and more attenuated

When the king s prerogative includes the power of calling parliament into session nothing short of revolution may resolve the issue for as Locke observes between an executive power in being with such a prerogative and a legislative that depends upon his will for th ir convening there can be no judge on earth

IN THE DIS USSION of monarchy as in the discussion of democracy or other forms of government the fundamental terms and issues do not have the same meaning in the various epochs of western thought The continuity of discussion in the tradition of the great books must be qualified especially in the field of political theory by reference to the differing historic institutions with which their authors are acquainted and concerned Ancient and modern controversies over the merits of monarchy in relation to other forms of government seem to be comparing institutions of government as different as the ancient and modern forms of the democratic constitution

In the ancient world the choice between purely royal and purely political government underlies the meaning and evaluation of monarchy In the modern world with its heritage from the feudal institutions of the Middle Ages either the mixed regime or constitutional monarchy is thought to offer a third alternative The praise of monarchy may therefore be the corollary of a justification of absolute government or the absolute state as with Hobbes and Hegel it may be accompanied by an attack on absolute or despotic power as with Locke and Montesquieu or in defense of purely republican principles monarchy may be attacked as by Rousseau and the Federalists, without differentiation between its absolute and limited forms

This does not mean that there is no continuity between ancient and modern discussion It seems to exist with respect to both elements in the idea of monarchy—the unification of government through its having one head and the rightness of absolute power On the point of unity Plato s argument that monarchy is the most efficient of the several forms of government which are otherwise equally just seems to be paralleled by modern arguments for a unified executive in the constitution of a republic It is also reflected in the reasoning of Montesquieu and Rousseau concerning the greater competence of monarchies to govern extensive territories On the point of absolute power there is some continuity between ancient and modern discussions of government by men versus government by law But here there seems to be greater similarity between ancient and modern arguments against giving sovereignty to an individual human being than there is between the modern defense of monarchy and ancient speculations concern ng royal government

Taking d fferent shape in Hobbes and Hegel the argument for the *necessity* of absolute government seems to be peculiarly modern It is not simply the point made by the ancients that under certain circumstances it may be right for the man of superior wisdom to govern his inferiors in an absolute manner as a father governs ch ldren or a god men The po nt s r ther that the very nature of government and the

state requires a unified repository of absolute power Hobbes does not ask whether the mon arch in whose hands such power is placed deserves this by reason of personal superiority to his subjects Hegel explicitly repudiates the relevance of any consideration of the mon arch s particular character Neither Hobbes nor Hegel argues for the divine right of kings or their divine appointment though Hegel does insist that the constitution itself which estab lishes the supremacy of the crown is not some thing made by man but divine and constant and exalted above the sphere of things that are made

That kings have absolute power by divine right is another peculiarly modern argument for absolute monarchy Not all the water from the rough rude sea says Shakespeare s Rich ard II can wash the balm off from an anointed king The breath of worldly men cannot depose the deputy elected by the Lord According to the theory of divine right the king is God s vicar not as Aquinas thinks the vicegerent of the people The theory of the divine right of kings does not seem to be a mediaeval doctrine It appears later in such tracts as those by Bar clay and Filmer which Locke undertakes to answer

The controversy involves its adversaries in dispute over the interpretation of Holy Writ The anointing of Christian kings is supposed to draw its significance from the establishment of this practice among the ancient Hebrews But the story of the origin of the Hebrew kingship can be given an opposite interpretation

The people of Israel after the leadership of Moses and Aaron first submitted their affairs to the government of judges and there was no king in Israel but every one did that which seemed right to himself Later they went to Samuel their judge saying Make us a king to judge us like all the nations This displeased Samuel Samuel prayed unto the Lord and the Lord said unto Samuel Hearken to the voice of the people in all that they say unto thee for they have not rejected thee but they have rejected me that I should not reign over them The Lord then describes the tribulations the people will suffer at the hands of an earthly ruler with absolute power a punishment they deserve for wanting to be ruled by a king instead of by God and God s law administered for them by judges

THE GREAT POEMS and histories of ancient Greece and Rome would seem to indicate that the divinity of kings is not a modern notion. The deification of emperors and kings certainly appears to be a common practice. But the assumption of divinity by kings is not supposed to signify divine appointment or election by the gods nor do the rulers of the ancient world justify their absolute power as a god given right

Furthermore in the political theory of Plato and Aristotle the analogy between royal rule and divine government works in the opposite direction According to their view the right to absolute government depends upon a radical inequality between ruler and ruled If a god were to rule men on earth as in the myth retold in Plato s *Statesman* he would govern them absolutely deciding everything by his wisdom and without recourse to written laws or estab lished customs If there were a god like man or if a true philosopher were to become kin he too would deserve to be an absolute monarch It would be unjust says Aristotle to treat the god like man merely as a citizen and so to treat him as no more than the equal of those who are so far inferior to him in virtue and in political capacity It would also seem to be unjust for a man who does not have great superiority over his fellow men to rule them like a king instead of being merely a citizen entitled to hold public office for a time

Aristotle frequently refers to royal government as the divine sort of government but he does not justify its existence except when one man stands to others as a god to men Though some of the historic kingships which Aristotle classifies are absolute monarchies none is royal government of the divine sort That seems to remain for Aristotle as for Plato a purely hy pothetical construction

Actual royal government has a patriarchal rather than a divine origin It is the kind of government which is appropriate to the village community rather than to the city state The kingly form of government prevails in the vil lage because it is an outgrowth of the family That is why says Aristotle the Hellenic states were originally governed by kings the Hellenes

were under royal rule before they came to gether as the barbarians still are

In thinkin that absolute or despotic govern ment befits the servile Asiatics but not the free men of the Greek city states Aristotle takes a position which has a certain counterpart in the views of Montesquieu and Mill These modern opponents of absolute monarchy do not assert that constitutional government is unconditionally better than despotism For certain peoples under certain conditions self government may not be possible or advantageous A rude peo ple Mill writes though in some degree alive to the benefits of civilized society may be un able to practice the forbearance which it de mands their passions may be too violent or their personal pride too exacting to forego pri vate conflict and leave to the laws the aveng ing of their real or supposed wrongs In such a case a civilized government to be really ad vantageous to them, will require to be in a con siderable degree despotic to be one over which they do not themselves exercise control and which imposes a great amount of forcible re straint upon their actions Montesquieu seems further to suppose that different races—largely as a result of the climate in which they live—are by nature inclined to vard freedom or servi tude The Asiatics are for him a people whose spirit perpetually dooms them to live under despotism

In contrast Mill s conditional justification of absolute government demands that despotism serve only a temporary purpose It must seek not merely to keep order but by gradual steps to prepare the people it rules for self govern ment Leading strings are only admissible he says as a means of gradually training the people to walk alone When they have reached that stage of development where they are able to govern themselves the despotic ruler must either abdicate or be overthrown

There is a deeper contrast between Mill on the one hand and Aristotle and Plato on the other one which goes to the very heart of the issue concerning royal and political govern ment Both Aristotle and Plato seem to be say ing that if the superior or god like man existed then royal government would be better than the best republic even for the civilized Greeks In calling royal rule the divine form of government they imply that it is the ideal even if it can never be realized This Mill most emphatically denies

The notion that if a good despot could be ensured despotic monarchy would be the best form of government I look upon he writes as a radical and most pernicious conception of what good government is The point at issue is not whether the good despot—the god like ruler or philosopher king—can be found Sup pose him to exist The point then to be made is that the people ruled by one man of super human mental activity would of necessity have to be entirely passive Their passivity is implied in the very idea of absolute power What sort of human beings Mill asks can be formed under such a regimen? Men must actually engage in self government in order to pa s from political infancy to maturity When ever it is possible representative or constitu tional government is therefore better than ab solute monarchy

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type wh ch are the volume and page numbers of the passages referred to For example in 4 HOMER *Il ad* BK I [265 83] 12d the number 4 is the number of the volume in the set the number 12d indicates that the pas sage is in section d of page 12

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lower halves of the page For example in 53 JAM s *Psychology* 116 119b the passage beg ns in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a a d b efer to the upper and lo er halves of the left ha d side of the page the letters c and d to the upper and lower halves of the right hand side of the pag F r example in 7 PLATO *Symposium* 163b 164 the passage begins in the lo er half of the left h nd s de of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR s DIVIS ONS One or more of the ma n divi ns of a work (such s PART BK CH SECT) are sometime included in the reference line numbers n brackets are g ven in cer tain cases *e g Il ad* BK II [265 283] 12d

BIBL REFER NC S The efe ences are to book chapter and rse When the Kin James and Do ay vers ons differ in title of books or n the numbering of chapters or verses th King James ver n is cited first and the Douay indicated by a *(D)* follows *e g* OLD TESTA MENT *Nehem ah* 7 45—*(D) II Esdras* 7 46

SYMBOLS The abbreviation esp calls the eader s attention to one or more e pecially relev nt parts of a whole reference passim signifies that th t pic is discussed intermit tently rather tha continuously in the work or p ssage c ted

For add tional inf mation concerning the style of the eferences see the Explanation of Refe ence Style for general guidance in the use f *The Great Id as* consult the Preface

1 The defin tion of mon chy and the classifi cation of the types of kingship

4 HOMER *Il d* K II [198-206] 12a
6 HEROD TUS *H tory* BK III 107 108
7 PLATO *Republ c* BK IV 356a / *St man* 598b-604b
9 A ISTOTLE *Pol t cs* K I CH 7 [1279 33 34] 476d H 14 483a-484a BK IV CH 10 [295 3 18] 495a / *Rl t r c* BK I CH 8 [1365b38–1366 3] esp [1366 1 3] 608b
20 AQUINAS *S mma Theolog ca* PART I 1 Q 95 A 4 NS 229b 230c Q I 5 A I 307d 309d
23 M CHIAVELLI *Pri ce* CH I 3 b CH IV 7a b CH IX 14 16a CH XIX 29 d
23 H BES *Leviath n* PART II 104d 105a 106d 107 PART I I 228b
35 LO KE *Ci l Governt t* CH X ECT 132 55a b
38 M NT QUI U *Sp it of L ws* BK I 4a 7 d BK X 75b 76c
38 R E U *Soci l C tract* BK I 410b 412 d BK IV 427d
40 GI BON *Decl e a d F ll* 24b
42 KANT *Scie e of Right* 450 c
46 HE EL *Ph l phy f Right* PART I par 73 91 d par 281 95b-d / *Pl l sophy of H story* INTRO 174a d

1a Th d st nction between royal and pol tical go ernment

1a(1) Absolute or person l rule contrasted w th constitution l government or r le by law

5 AESCHYLU *Prometheu Bourd* [3 2 326] 43c
5 EU PIDES *Suppl ants* [399-456] 261d 262b
6 H RO OTUS *H st ry* K II 107c d BK VII 233a d
7 PLATO *St t sman* 598b 604b / *L us* K I I 670c 676 BK IV 680d 682 K IX 754 b / *Seventh Letter* 805d
9 ARISTOTL *Ethics* K V CH 6 [1134 30-b8] 382a b / *Pol t cs* BK CH [125 6–16] 445a b CH 5 [54 34-b9] 448 CH 7 [55b16–20] 449b C I I 453d 454a BK III H 15 17 484b 487a K V CH 4 [9 4 37] 491b d CH [I 95 9 24] 495a b K V CH [1312b37 313 10] 515
14 P UTAR H *R m ilu* 27d 28a / *Ca ar* 591d / *Cato th Y u er* 638b 639a
15 TA TU *Ann l* K 1a 2b K I I 51b 61c 62
19 AQU N S *Summ Th l g* P T Q 8 A 3 R P 2 430c-431d

(1a *The d st nct on b tween royal and pol t cal go ernment* 1a(1) *Ab olute or p rs nal rule contrasted w th const tut onal govern ment or rul by law*)

20 Aquinas *Summa Theolog ca* part i ii q 90 a 1 rep 3 205b 206b q 95 a 1 rep 2 226c 227c q 96 a 5 rep 3 233d 234d
23 Hobbes *Le athan* part ii 114b 115a 131d 132a 149d 150a
35 Locke *C vil Go ernment* ch iv sect 21 29d ch vii sect 90–94 44d-46c ch xi 55b 58b c i xiv 62b 64c ch xviii ect 199–202 71a 72a
38 Montesqu eu *Spi t f Law* bk ii 4a 8b d bk iii 12a d bk v 29a 31b bk vi 33a 35a 36a 37b 37d 38b bk viii 54a b
38 Rousseau *In qual ty* 323d 324a 357b c 358b d / *Social C nt act* bk i 408c 419a c
40 Gibbon *De l n and Fall* 24b d 28b pass m esp 25a c 51b d 154a c 592a
41 Gibbon *De l n and Fall* 73d 75a
42 Kant *Science f Right* 438b 450b / *Judge ment* 547b c
43 Declaration of Independence 1a 3b pas sim
43 Mill *Liberty* 267d 268b / *Rep e entat ve G ernment* 339d 340c 341d 350a passim
44 Boswell *J hn on* 195 d
46 Hegel *Ph lo phy of R ght* p rt ii par 286 96c 97a additions 171 146b c / *Ph lo o phy of H tory* part i 208b c 213b 214d part ii 262a c p rt i 301c 302a

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6 Herodotus *H tory* k vi 195d 196c bk vii 238c
7 Plato *Statesman* 598b 604b / *Law* bk iv 679c 680d
9 Aristotle *Ethics* k viii ch 10 [1160b2–6] 412d c i [116 11 23] 413b c / *Pol t* bk i c i 5 447d 448c ch 12 13 453d-455a c pass m bk iii ch 13 [28 4 3]-ch 18 [1288b7] 482a-487a bk v ci 10 512d 515d
14 Plutarch *Romulu Theseus* 30c d / *Ag si lau* 480b d 481a
15 Tacitus *H t ie* bk ii 239b
23 Hobbe *Le atha* 47a 283a c esp part i ii 49a 164a c
26 Shakespeare *Ri ha d II* act iv sc i [115 318] 342c 344d
27 Shakespeare *M b th* act i sc iv [15 27] 287c
30 Bacon *N w Atlant* 208a b
33 Pascal *Pensé s* 33 231b-232a
35 Locke *C i l G ernmen* ch ii sect 13 28a b ch iii sect 17 28d 29a ch iv 29d 30b ch vii sect 90–94 44d-46c c i xi
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38 Montesquieu *Sp rit of Laws* bk i 3b-c bk ii 4a 8d 9a c bk iii 12a 13c bk i 15a c bk v 26c 31b bk vi 33d 34b 39d 40d bk viii 54a b bk xv 109a bk xix 137c d bk xxv 211c d
38 Rousseau *Inequal ty* 359a c / *Social Con t act* bk i 388b 389d
40 Gibbon *Decl ne and Fall* 26b 28b passim, esp 27b c 50a 51c d 153c 155b passim
41 Gibbon *Decl ne and Fa l* 73d 75a esp 74d 173c d 219c 220a c 307a c 317b d 320d 321b
42 Kant *Science f R ght* 438b
43 Federalist number 45 148a
43 Mill *Liberty* 267d 268a 321a b / *Repre sentative Go ernment* 339c 341a 341d 344d passim
44 Boswell *Johnson* 120a c
48 Melville *Moby D ck* 107a b

1b Modifications of absolute monarchy other embodiments of the monarchical princi ple

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5 Aeschylus *Suppl ant Ma den* [359–422] 5b-6b
6 Thucydides *P l ponnesian W a* bk ii 391c d
7 Plato *La* bk iii 671c 672c bk i 680d 681a bk vi 699d 700b
9 Aristotle *Pol t c* bk ii ch 6 [1265b26–1266 30] 461b d ch 9 [1270b7 1271a–6] 466d 467c ch 11 469a 470b
14 Plut rch *Lycu rgus* 34d 35d
15 Tacitus *Annal* k iv 72a b
19 Aquinas *S mma Th ologica* part i q 81 a 3 rep 2 430 -431d
20 Aquinas *Summa Th log a* part i ii q 95 a 4 ans 229b 230c q 105 a 1 307d 309d
23 Machia elli *Pr ce* ch x x 27a b
23 Hobbes *Leviathan* part ii 103d 104a 151c-152a part iii 228a b
35 Locke *C il Go ernment* c i x sect 132 55a b ch xiii sect 151 152 59d 60b ch xiv 62b 64c ch xix sect 212 213 74a 76d esp sect 223 76c d
38 Montesquieu *Sp it of Laws* bk i 7c 8c bk v 32a bk xi 75b 78a
38 Rous e u *Social C nt a t* bk iii 410c d 414d 415b bk iv 427d
40 Gibbon *De l ne and Fall* 26d 28b esp 28a b 342c 630d
41 Gibbon *D cl ne and Fall* 71d 81c d 217d 219a 403b c 428a
43 Federalist number 17 70a d number 69 213b c number 71 216a b
43 Mill *Rep esentat e G ernment* 351a-c

44 BOSWELL *Johnson* 178a-c 390a-b
46 HEGEL *Philosophy of Right* PART III par 273 90d-91d par 286 96d / *Philosophy of History* PART IV 342b-d 356d-357a

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7 PLATO *Statesman* 598b-604b / *Laws* BK III 667c-d
9 ARISTOTLE *Politics* BK III CH 14 [1285ᵃ3-16] 483a-b CH 15 [1285ᵇ34-1286ᵃ5] 484b CH 15 [1286ᵇ27]-CH 16 [1287ᵃ10] 485b-c BK IV CH 10 [1295ᵃ15-17] 495a BK V CH 11 [1313ᵇ18-33] 515d-516a / *Rhetoric* BK I CH 8 [1366ᵃ1-13] 608b-c
23 HOBBES *Leviathan* PART II 106d-107c
35 LOCKE *Civil Government* CH VII SECT 94 46a-c CH XVIII SECT 200 71a-c passim
40 GIBBON *Decline and Fall* 622d-623a
42 KANT *Science of Right* 439 440b 441b-c
43 MILL *Representative Government* 343c-344a
46 HEGEL *Philosophy of Right* PART III par 273 90-92a par 281 95b-d par 283-284 96a-b par 286 96c-97a par 292-293 98a-b par 300 100b ADDITIONS 170-17 145d-146d / *Philosophy of History* PART I 208b-c PART IV 342b-d 368c-d

1b(3) The monarchical principle in the executive branch of republican government

38 MONTESQUIEU *Spirit of Laws* BK XI 72b
38 ROUSSEAU *Social Contract* BK III 414d-415a
43 FEDERALIST NUMBER 37 118d-119b NUMBER 48 157b NUMBER 67 203b-205b NUMBER 69-70 207a-214b passim
43 MILL *Representative Government* 350d-351a 356b-357a 409d-413d passim

1c The principle of succession in monarchies

OLD TESTAMENT *Judges* 8:22-9 / *I Kings* 1—(D) *III Kings* 1 / *I Chronicles* 23:1—(D) *I Paralipomenon* 23:1
APOCRYPHA *I Maccabees* 9:28-30—(D) OT *I Machabees* 9:28-30
6 HERODOTUS *History* BK V 167b-168a BK VI 194d-195b 196d-199a BK VII 214b-d 252c-253
9 ARISTOTLE *Politics* BK III CH 15 [1286ᵇ22-28] 485a
14 PLUTARCH *Numa Pompilius* 49b-52c / *Pyrrhus* 318a / *Lysander* 363d-366a / *Agesilaus* 480b-d-482a / *Agesilaus-Pompey* 538b-d-539a
15 TACITUS *Annals* BK VI 98b-d / *Histories* BK I 193-194a
23 MACHIAVELLI *Prince* CH XIX 29c-d
23 HOBBES *Leviathan* PART II 106b-d 107b-108a 109
26 SHAKESPEARE *1st Henry VI* ACT I SC V [33-29] 13b-14 / *2nd Henry VI* ACT II SC II 43c-44c / *3rd Henry VI* ACT I SC I [50-189] 70b-71d / *Henry V* ACT I SC II 534a-5-7b
33 PASCAL *Pensées* 3 229b-230a

35 LOCKE *Civil Government* CH X SECT 132 55a-b
38 MONTESQUIEU *Spirit of Laws* BK V 28b-d BK XXVI 222b-d
38 ROUSSEAU *Social Contract* BK III 413d-414a
39 SMITH *Wealth of Nations* BK III 165c-166a
40 GIBBON *Decline and Fall* 30b-c 61b-c 68b-d 69b 161c 430b-c
41 GIBBON *Decline and Fall* 194a-b 204b-205a 212d-213c 223c-d 445b 508c-d
44 BOSWELL *Johnson* 347d-348c
46 HEGEL *Philosophy of Right* PART III par 280-281 94d-95d par 286 96c-97a / *Philosophy of History* PART IV 325a-b 344c 355c-d

2 The theory of royalty

2a The divinity of kings

APOCRYPHA *Judith* 6:2—(D) OT *Judith* 6:2 / *Wisdom of Solomon* 14:16-21—(D) OT *Book of Wisdom* 14:16-21
4 HOMER *Iliad* BK I [254-287] 5d-6a
5 AESCHYLUS *Persians* [623-680] 21c-22a
13 VIRGIL *Eclogues* I [6-10] 3 IV [15-17] 14b V [56-80] 16b-18b IX [46-49] 30b / *Georgics* I [24-42] 37b-38a / *Aeneid* BK I [286-296] 110b-111a BK VI [791-805] 232a-b BK VIII [126-142] 262b-263a
14 PLUTARCH *Romulus* 28a-29c / *Numa Pompilius* 50b-52c / *Alexander* 553b-554b
15 TACITUS *Annals* BK I 4c-d BK IV 73b-d 80c-d
23 HOBBES *Leviathan* PART I 82b-c
26 SHAKESPEARE *Richard II* ACT V SC I [162-242] 343b-344a
27 SHAKESPEARE *Hamlet* ACT IV SC V [123-125] 60d-61a / *Pericles* ACT I SC I [103-114] 422d
40 GIBBON *Decline and Fall* 28b-d 154d esp 712c [n 100]

2b The analogy between divine government and rule by the best man: the philosopher king

7 PLATO *Republic* BK II-VII 310-401d esp BK V-VI 368c-383a / *Statesman* 586c-590a 598b-604b / *Laws* BK IV 679-681d / *Seventh Letter* 801b-806b-c
9 ARISTOTLE *Politics* BK I CH 12 [1259ᵇ10-17] 454 BK III CH 13 [1284ᵃ3-1284ᵇ18] 482a-b [1284ᵇ25-34] 482d-483a CH 15 484a-485b CH 17 [1288ᵃ7-34] 486d-487 BK VII CH 14 [1332ᵇ16-26] 537b-c
14 PLUTARCH *Lycurgus* 47a-48c / *Numa Pompilius* 50b-52 59c-60b / *Themistocles* 99b-c / *Phocion* 605b-d / *Dion* 784d-785a
19 AQUINAS *Summa Theologica* PART I Q 105 A 3 530a-c
23 HOBBES *Leviathan* PART I 164c
30 BACON *Advancement of Learning* 20d-21a 74d-75a

(2 *The theory of royalty* 2b *The analogy between divine government and rule by the best man: the philosopher king.*)

31 SPINOZA *Ethics* PART II PROP 3 SCHOL 374b-c
35 LOCKE *Civil Government* CH XIV SECT 165-166 63c-64a
36 SWIFT *Gulliver* PART I 28b-29a
40 GIBBON *Decline and Fall* 338d-339a
43 FEDERALIST NUMBER 49 160a

2c The divine institution of kings: the theory of the divine right of kings

OLD TESTAMENT *Deuteronomy* 17:14-20 esp 17:15 / *I Samuel* 2:10; 9:15-10:13; 10:18-19,24; 12:12-14,17-19; 15:1,17; 16:1-13; 24:4-10; 26:7-25—(D) *I Kings* 2:10; 9:15-10:13; 10:18-19,24; 12:12-14; 15:1,17; 16:1-13; 24:5-11; 26:7-12 / *II Samuel* 1:13-14; 5:12; 7:8-11,16; 12:7; 23:1—(D) *II Kings* 1:13-14; 5:12; 7:8; 16; 12:7; 23:1 / *I Kings* 16:2—(D) *III Kings* 16:2 / *II Kings* 9:1-7; 12—(D) *IV Kings* 9:1-7,12 / *I Chronicles* 28:1-10—(D) *I Paralipomenon* 28:1-10 / *II Chronicles* 9:8—(D) *II Paralipomenon* 9:8 / *Nehemiah* 13:26—(D) *II Esdras* 13:26 / *Isaiah* 45:1-6—(D) *Isaias* 45:1-6 / *Daniel* 4:17,25,32—(D) *Daniel* 4; 4:22,29
APOCRYPHA *Wisdom of Solomon* 9:7—(D) OT *Book of Wisdom* 9:7 / *Ecclesiasticus* 7:7; 47:1—(D) OT *Ecclesiasticus* 17:14-15; 47:13
NEW TESTAMENT *Acts* 13:21-22
14 PLUTARCH *Numa Pompilius* 50b-51c
23 HOBBES *Leviathan* PART II 111b-112b; 123a-b; PART III 225c-d
26 SHAKESPEARE *Richard II* ACT I SC II [3-43] 323a; ACT II SC I [54-62] 336a; SC III [2-10] 338c-d; ACT IV SC I [2-242] 342c-344a
35 LOCKE *Civil Government* CH I SECT I 25a; CH VI SECT 112 51a-b; CH XIX SECT 231-239 78c-81b
36 SWIFT *Gulliver* PART I 29a; PART IV 182b
37 FIELDING *Tom Jones* 258 269a
38 ROUSSEAU *Inequality* 358d-359a
40 GIBBON *Decline and Fall* 33b-c; 292d-293b esp 759d [n 22]
41 GIBBON *Decline and Fall* 204d; 205a; 209c
46 HEGEL *Philosophy of Right* PART III par 279 93d
51 TOLSTOY *War and Peace* EPILOGUE II 680b-c

2d The myth of the royal personage: the attributes of royalty and the burdens of monarchy

OLD TESTAMENT *Judges* 9:1-20 / *Job* 34:18-20 / *Proverbs* 14:28; 20:2; 21:1; 25:3
APOCRYPHA *Wisdom of Solomon* 7:1-6—(D) OT *Book of Wisdom* 7:1-6 / *Ecclesiasticus* 10:10-18; 11:5; 40:1-4—(D) OT *Ecclesiasticus* 10:12-22; 11:5; 40:1-4

4 HOMER *Iliad* BK III [161-224] 20c-21b; BK IX [96-114] 58a-b
5 SOPHOCLES *Oedipus the King* [1-602] 104c-d
5 EURIPIDES *Medea* [115-130] 213b / *Iphigenia at Aulis* [12-33] 425b; [442-453] 428d-429a
6 HERODOTUS *History* BK I 7b-8a; BK II 85d-86b; BK III 93c; BK VIII 281d-282a
7 PLATO *Laws* BK III 669b-674d
9 ARISTOTLE *Ethics* BK VIII CH 7 [1158b29-1159a3] 410d-411a; CH 11 [1161a11-23] 413b-c / *Politics* BK III CH 13 [1284a3-18] 482a-b; [1284b25-34] 482d-483a; BK V CH 11 [1314a35-1315b11] 517b-518c
12 LUCRETIUS *Nature of Things* BK V [1136-1141] 76a
12 AURELIUS *Meditations* BK I 253a-256d; BK VI SECT 36 282b
14 PLUTARCH *Romulus* 27c-28d / *Numa Pompilius* 51b-c / *Pericles* 121c-d / *Alexander* 540b-d; 576d passim / *Cleomenes* 661b-d / *Tiberius Gracchus* 678b-d / *Demosthenes* 697c / *Demetrius* 727a-b; 732a-c; 742c-743b / *Aratus* 835b-c / *Artaxerxes* 847b-d
15 TACITUS *Annals* BK III 52c; 58a-b; BK I 73b-74a; BK X 104a-c / *Histories* BK I 193a-c; BK I 224c-d
23 MACHIAVELLI *Prince* 1a-b
24 RABELAIS *Gargantua and Pantagruel* BK I 35a-36a; 58a-59d; BK III 131b-d; 133b
25 MONTAIGNE *Essays* 126b-131a; 311c; 327d; 329d; 436-439; 443d-446a; 451d-452a
26 SHAKESPEARE *3rd Henry VI* ACT I SC II [29-34] 73b; ACT II SC V [1-54] 81d-82a; ACT III SC I [61-65] 85b / *Richard II* 320-351d esp ACT III SC II [27-90] 335d-336b, [144-177] 337a-b; SC III [61-209] 338c-340a; ACT IV SC I [162-334] 343b-345a / *King John* ACT IV SC II [203-214] 396d / *Merchant of Venice* ACT IV SC I [184-197] 427c / *1st Henry IV* ACT III SC II [29-91] 453b-d / *2nd Henry IV* ACT III SC I [1-31] 482d-483a; ACT IV SC V [19-47] 494c-d; ACT V SC II [122-145] 499b / *Henry V* ACT IV SC I [104-301] 552d-554c
27 SHAKESPEARE *Hamlet* ACT I SC III [10-28] 34c; ACT III SC III [1-23] 53b-c / *King Lear* 244a; 283a-c / *Macbeth* ACT I SC VII [16-25] 289c / *Antony and Cleopatra* 311a; 350d
28 HARVEY *Motion of the Heart* 267a-b
30 BACON *Advancement of Learning* 1a-2c; 20d; 25c / *New Atlantis* 205d-207b
32 MILTON *Paradise Lost* BK II [430-456] 120b-121a
33 PASCAL *Pensées* 139 196b-199a; 308 228b
35 LOCKE *Civil Government* CH XVII SECT 202 71d-72a passim; SECT 205 72c; CH XIX SECT 224 76d-77a
38 MONTESQUIEU *Spirit of Laws* BK II 8d-9c; BK III 12a-13c; BK IV 15a-b; BK V 26c-29a; BK VI 39d; 42a-b; 43c-d; BK XI 93d-94; 94d-95b

38 ROUSSEAU *Inequality* 358d 359c / *Social Contract* BK III 412d-413a 414c d
39 SMITH *Wealth of Nations* BK V 356b d
40 GIBBON *Decline and Fall* 28b 154b 155b 156b-157d 329c 547a b 572a c
41 GIBBON *Decline and Fall* 39b-40a 194a d 297c-d 307b-c 317b 321b
43 FEDERALIST NUMBER 67 203b-c NUMBER 69 207c 210a NUMBER 70 213b
43 MILL *Liberty* 275b c / *Representative Government* 341d 342b 363b d
44 BOSWELL *Johnson* 125c 154c 155 155d 216b 251b d 333b c 335c 344a b
46 HEGEL *Philosophy of Right* PART III par 281-282 95b 96a ADDITIONS 173 146d
47 GOETHE *Faust* PART [2211 44] 52b 53b PART II [4761 4875] 118b 121a [10 24 259] 249b-250a [10 455-500] 254b 255b
48 MELVILLE *Moby Dick* 81a 82b 93b 94a 107 109b 395a b
51 TOLSTOY *War and Peace* BK I 1d 2b 49b BK II 87b-d BK III 135c 137c 141b 142d 147c 150a 157a 161b BK V 230b 234a BK VI 257c 259a passim BK VI 308d 309a BK IX 342a 346 348c 349 382a 388a c BK X 405b-406 444a-450a 456a-459d 465c 468a c BK XI 497c-499c 518c d BK XII 536 537b BK XIII 573b 574b

3 The use and abuse of monarchical power

3a The good king and the benevolent despot in the service of their subjects the education of the prince

OLD TESTAMENT *Genesis* 41 33 39-40 / *Exodus* 18 21 6 / *Deuteronomy* 1 13 7 14-20 / *Judges* 9 8 15 / *I Samuel* 15 0-35—(D) *I Kings* 15 10-35 / *II Samuel* 23 3—(D) *II Kings* 23 3 / *I Kings* 4 29-34 11 26-4 14 2 —(D) *III Kings* 4 29-34 11:26-4 14 0 / *II Chronicles* 1-7-12—(D) *II Paralipomenon* 1 7 / *Psalms* 2 esp 2 10-12 72 —(D) *Psalms* esp 2 10- 3 71 / *Proverbs* 8 15 16 4 28 35 16 10-15 7 7 20 26 28 25:2-5 28 2 15 16 29.2 4 12 4 31 4-5 / *Ecclesiastes* 10 4 7 6-17 / *Jeremiah* 23 3 6—(D) *Jeremias* 3 3- / *Ezekiel* 45 9—(D) *Ezechiel* 45 9

APOCRYPHA *Wisdom of Solomon* 1 1 6 9—(D) OT *Book of Wisdom* 1 6 9 / *Ecclesiasticus* 10 1 4 14 41 17 8—(D) OT *Ecclesiasticus* 10 1 4 17 4 2 22 / *I Maccabees* 14—(D) OT *I Machabees* 14

4 HOMER *Iliad* BK X [1 72] 57a 58d
5 AESCHYLUS *Suppliant Maidens* [359-42] 5b 6b / *Persians* [647-68] 21d 22a [759-786] 23b-c
5 SOPHOCLES *Oedipus the King* [-77] 99 d / *Antigone* [6 2] 132 d [658 745] 136d 137c
5 EURIPIDES *Suppliants* [339-358] 261b-c / *Iphigenia at Aulis* [334 375] 427d-428b

6 HERODOTUS *History* BK III 108b c
7 PLATO *Republic* BK I 303a 304c BK II IV 316a 356a BK VI VII 383c 401d / *Statesman* 598b 608d / *Laws* BK IV 679c 680d / *Seventh Letter* 801b 806b c 814b-c
9 ARISTOTLE *Ethics* BK VIII CH 10 [1160 36-^{b}9] 412 d CH 11 [1161 11 23] 413b-c / *Politics* BK I CH 13 454a-455a c passim BK III CH 14 [1285^{b}3 19] 483d 484a CH 15 484b-485b passim esp [1286^{b}8 12] 484d-485a CH 18 487a c BK V CH 10 [1310^{b}33 1311 8] 513b CH 11 [1314 37-1315^{b}11] 517b-518c
12 AURELIUS *Meditations* BK I 253a 256d
14 PLUTARCH *Lycurgus* 32a-48d esp 47 -48c / *Solon* 64b d 77 c esp 68d 70d / *Poplicola* 80d 81c / *Poplicola Solon* 86d 87a / *Pericles* 129 141a c esp 129c 130a / *Agesilaus* 480b d 481a / *Alexander* 542d 544a / *Phocion* 605b d / *Demetrius* 742c 743b / *Dion* 782c 788b
15 TACITUS *Annals* BK XII 125d 126a / *Histories* BK I 198b c BK II 215c d BK IV 290a d
20 AQUINAS *Summa Theologica* PART I II Q 105 A 1 RE 307d 309d
21 DANTE *Divine Comedy* PURGATORY VII [61-136] 63a 64 X [70-96] 68a b PARADISE XIII [88-111] 126b c
23 HOBBES *Leviathan* INTRO 47b d PART II 143d 153a 159c 164 c
24 RABELAIS *Gargantua and Pantagruel* BK I 26d 30c
25 MONTAIGNE *Essays* 131b 132a 314c 316a 386b 388c 436 -439c
26 SHAKESPEARE *1st Henry IV* 434a-466d esp ACT I SC II [8 240] 437 -d ACT I SC II [93 6] 453d 454c / *2nd Henry IV* 467a 502d esp ACT V SC II [122 145] 499b / *Henry V* ACT I SC I 533a d ACT IV SC I [1 4-321] 552d 554d
27 SHAKESPEARE *King Lear* ACT III SC I [27-36] 264c / *Macbeth* ACT V SC III [1-139] 303b 304d
29 CERVANTES *Don Quixote* PART II 340b 343a 345a 348 352b 356d 360d 364a 366d 369b
30 BACON *Advancement of Learning* 1b 2c 20d 25 74d 75 94b c / *New Atlantis* 20 d 207b
35 LOCKE *Civil Government* VII SECT 94 46 CH VIII SECT 5-112 48c 51b passim CH X V 62b 64c CH XVI I ECT o 71a S CT 20 71d 72a
36 SWIFT *Gulliver* PART III 112 113b
37 FIELDING *Tom Jones* 268 269a
38 MONTESQUIEU *Spirit of Laws* BK IV 14d BK XII 93c 95b
38 ROUSSEAU *Inequality* 357b / *Social Contract* BK III 412d-414d
40 GIBBON *Decline and Fall* 31b 32d 50a b 85d 86a 260a b 284a 288b 289a 338d 340c 341d 342c 343c 344 c 448c-449c 577 580d esp 577d 578a 6 8 646d passim

(3 *Th use and abus of monarch cal power* 3a *The good k ng and the benevolent d s pot in thes re ce of th r subjects the educa- t i of the prince*)

41 GIBBON *Decl ne and Fall* 102b 104b 176c d 504c 505c
43 MILL *R p esentat e Go ernment* 342a 344d 351c 354b
46 HEGEL *Ph losophy of R ght* ADDITIONS 171 146b c / *Philosophy of History* PART I 212d 213a 243b c PART IV 361d 362a
51 TOLSTOY *W a and Peace* BK I 9c 10d

3b The explo tation of absolute power for personal aggrandizement the strategies of princes and tyrants

OLD TESTAMENT *I Samu l* 8 11 18—(D) *I King* 8 11 18 / *II Samu l* 1 6-12 13—(D) *II King* 11 6-12 13 / *I K ng* 12 1 15 21—(D) *III K ng* 12 1 15 21 / *II Ch onicle* 10—(D) *II Pa al pomenon* 10 / *Isa ah* 1 23 3 4 15 10 1 3 14 4-6—(D) *I a as* 1 23 3 14 15 10 1 3 14 4-6 / *Jeremiah* 22 1 23 2—(D) *Jerem as* 2 1 23 2 / *F k l* 22 27 46 8—(D) *E e h l* 22 27 46 18 / *Dan el* 3 1 12 6 7-8 / *M ah* 3 -3 7 3 4—(D) *M ch a* 3 1 3 7 3 4 / *Zephan ah* 3 3—(D) *Soph n a* 3 3
APOCRYPHA *Jud th* 2 1 12—(D) OT *Ju d th* 2 1-6 / *Eccle a t cu* 8 2—(D) OT *E l ia t cu* 8 2 3 / *I Maccabe* 1 41-64 10 22 46—(D) OT *I Ma hab es* 1 43-67 10 22 46
5 EURIPIDES *Iph en a at Aul s* [334 375] 427d 428b
6 HERODOTUS *H tory* BK I 23b 24a 35b 37a BK III 107c d
7 PLATO *Republ c* BK I 301b 304c BK II 311b-313a / *Laws*, BK I 672d 674d BK IV 681b 682c / *Seventh Letter* 811b 813d
9 ARISTOTLE *Ethic* BK V CH 6 [134 30-b8] 382a b BK VIII CH 10 [1160a36-b1] 412c d [116 b23 33] 413a / *Pol t* BK CH o [129 18 23] 495a b BK V C 0-11 512d 518c / *Rheto c* BK I C I 8 [366 3-6] 608b
14 PLUTARCH *Pyrthu* 319b d / *Ag laus* 482a 484a 489b c 495a b / *P mpey* 521a b / *Demet us* 742c 743b
15 TACITUS *Annal* BK I 1a 5a BK II 58d 59a / *H sto* BK I 195a 197a-c
20 AQUINAS *Summa Th ol g ca* PART I II Q 105 A I RE 2 5 307d 309d
21 DANTE *Du n C m dy* HELL, XXVII [55 136] 40a-41b PURGATORY VI [58 151] 61b-62c XX [34-96] 83c 84a P RADISE XIX [115 148] 136b-c
23 MACHIAVELLI *Prin e* 1a 37d
23 HOBBES *Leviathan* P RT I 76d
25 MONTAIGNE *E ays* 51a 55d
26 SHAKESPEARE *Ist Henry VI* 1a 32a c / *2nd Henry VI* 33a 68d / *3 d Henry VI* 69a 104d esp ACT II SC VI [1 3] 83b c ACT III C I [124 193] 87c 88a / *R chard III* 105a 148a c / *Richa d II* 320a 351d esp ACT III SC IV [29-90] 340c 341a / *King John* 376a-405a c / *Ist Henry IV* ACT IV SC III [52 105] 459d-460b / *2nd Henry IV* ACT IV SC V [1 8 225] 496b d
27 SHAKESPEARE *Macbeth* 284a 310d
35 LOCKE *C vil Government* CH VII SECT 90-94 44d-46c pas im CH VIII SECT 111 50d 51a CH XI SECT 138 57b c CH XIV SECT 161 166 62d 64a CH XVIII SECT 199-20 71a 72a SECT 210 73b c
36 SWIFT *Gull er* PART I 37a b
38 ROUSSEAU *Inequality* 357a c 359b-c / *Social C ntract* BK I 391a BK III 412d-413a 415d 416a
40 GIBBON *Decl ne and Fall* 25a 26d 29b-c 38a c 42b d 43b 60a-c 70c 71b 141c 155a b
41 GIBBON *Decl ne and Fall* 39b-40b 113c 114a 173b 174a
43 DECLARATION OF INDEPENDENCE 1a 3b
43 FEDERALIST NUMBER 4 35b NUMBER 22, 83c NUMBER 75 223c d
43 MILL *Rep sentat ve Government* 366a-c
46 HEGEL *Ph losophy of History* PART III 300c-302a
51 TOLSTOY *W a and Peace* BK I 9c 10d

4 Compar son of monarchy with other forms of government

6 HERODOTUS *H sto y* BK III 107c 108d
7 PLATO *R p bl c* BK IV 356a BK VIII 401d 416a esp 402a d BK IX 416a 421a / *Sta ema* 598b 604b / *La s* BK III 670d 676c
9 ARISTOTLE *Eth s* BK VIII CH 10 412c-413b passim e p [160a31 36] 412c / *Pol tics* BK I I C 7 476c-477a C I 13 [1286 23 b22] 484c 485a CH 7 8 486c 487a c BK IV CH 2 [1289 26-b4] 488b c CH 4 [1292 4 37] 491b d passim BK V CH 10 [1312 40-b9] 514d 515a
20 AQUINAS *Summa Th ologica* ART I I Q 95 A 4 ANS 229b 230c Q 105 A I ANS 307d 309d
23 MACHIAVELLI *Pr nce* CH I 3a
23 HOBBES *Leviathan* PART II 104b 108b 112b c 154b c PART III 228b PART I 273a c
35 LOCKE *Ci l G ernm nt* CH X SECT 132 55a b
38 MONTESQUIEU *Spir t of Laws* BK II I 4a 16a K V 25a 26d BK V I 30a-43d BK VI 47d-48a BK IX 58b d 61d BK XII 90b-c BK XIII 96a 102a c passim
38 ROUSSEAU *In q al ty* 359a b / *S cial Co t a t* BK III 409 -410c 412c-414d 415d
42 KANT *Sc nc of R ght* 450a d
43 FEDERALIST NU ER 9 48b d UMBER I 70a d NUMBER 22 83b d NU ER 39 125b-d passim NU ER 69 207a 210c passim NUM ER 213b NU BER 84 252b 253a
43 MILL *Rep senta e Go ernm nt* 338d 339a 341d 355b pas m esp 346a-c 363b-364d 366a 367c

6 HEGEL *Philosophy of Right* PART III par 273 90c 92 par 279 94b d ADDITIONS 165 145a b / *Philo ophy of Histor* INTRO 174a 175c

The patriarchical character of kingship absolute rule in the family or tribe and paternalism in the state

6 HER OTUS *History* BK I 35c d
7 PL TO *Stat sm n* 581a c / *Laws* BK III 664d 666c
9 ARISTOTLE *Ethics* BK V C I 6 [1134b8 17] 382b-c CH II [135b5 14] 387a c BK VIII CH 10 [160b23 32] 413a CH II [1161 II 23] 413b c BK X CH 9 [80b3 7] 435b / *Politics* K I CH I [1252 6-16] 445a b CH 2 [1252b16-24] 445d-446a CH 7 [255b16-20] 449b CH 12 [I 59 37]-CH 13 [1260 14] 453d-454c BK III CH 6 [2 8b30-1279 2] 476a b CH 14 [285b29-33] 484a BK V CH 10 [1310b33 1311 8] 513b
18 AUGUSTINE *City of God* BK XIX CH 12 517 d C I 13 7 519 523a
23 HO BES *Leviatha* PART I 68a PART II 109b 111d 121a 155b
26 S AK E R *T ming of the Shrew* ACT V C I [136- 79] 227d 228a c
30 B CON *Advancement of Le ing* 34a / *New Atlant* 207b 209d
35 LOCKE *C l Government* CH I S CT I 2 25a-c CH V 36a 42 CH VII SECT 86 43d 44a CH III SECT 5-107 48c 49d SECT 110-112 50c 51b C I XIV SECT 162 63a CH XV 64c 65d
36 S ERN *Tr t am Shandy* 216b
38 MONTE QUIEU *Spir t of L us* BK I 3b BK XVI 118a c BK XIX 140a c
38 ROUS EAU *Inequal ty* 357a b 359b-c / *Polit c l E o my* 367 368c / *S cial Contract* BK I 388a BK II 414c
40 G B ON *Decl and Fall* 412c 413b
46 HEG *Philos phy of R ght* ART III par 273 91 d ADDITIONS I 134d 135a / *Ph lo phy f H story* INTRO 172b d PART 211b 212c d
53 JAMES *Psych l gy* 731b
54 FREUD *Group P y hology* 686c 687d 689

4b The l ne which div des mon rchy from despot m and tyranny

6 HERODOTUS *History* BK II 107c d
6 THUCY IDES *P lop es n War* K I 352 d
7 PLATO *Republ c* K IX 418d-419a / *St tes m* 590c d 598b-604b / *Laws* BK II 672d 674d
9 ARISTOTLE *Eth s* BK V CH 6 [1134 30-b8] 382a b BK V II CH 10 [160 36-b11] 412 d [1160b 3 3] 413a / *P lit cs* BK III H 7 476c 477 c p[1279b4 10] 476d 477a CH 8 [79b 6-17] 477a CH 14 [1285a 7 b3] 483b d K IV H [1 89a26-b4] 488b-c CH 4 [92 5 9] 491c I 10 495a b BK V H [310 39-3 8] 512d 513b [3 2 40-b9] 514d 515a [31 b37 1313 6] 515 d C I I 515d 518c passim esp [1314 37 13 5b11] 517b 518c / *Rhetoric* BK I CH 8 [1366 I 3] 608b
14 PLUTARCH *Romulus Theseus* 30c d / *Lycur gus* 34d / *Demet ius* 742c 743b / *Dion* 783b d 784d 785a
15 TACITUS *Annals* BK XII 115d / *Histor es* BK I 193c 194a
20 AQUINA *Summa Theologica* PART I II Q 95 A 4 ANS 229b-230c Q 105 A I REP 2 5 307d 309d
23 HOBBES *Leviathan* PART II 105a 150c 151a PART IV 273a c CONCLUSION 280d
30 BACON *Advancement of Learn ng* 27a
33 PAS L *Pens es* 5 174a
35 LOCKE *Civil Government* CH II SECT 13 28a b CH VII SECT 90-94 44d-46c passim CH VIII SECT 107 49b d CH XIV 62b 64c passim CH XVIII SECT 199 02 71a 72a CH X X 73d 81d
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Other considerations of the mixed regime and its distinction from the mixed constitution *see* CONSTITUTION 3a 5b DEMOCRACY 3b GOVERNMENT 2b

Monarchy in relation to other forms of government *see* ARISTOCRACY 2a DEMOCRACY 3c GOVERNMENT 2–2e OLIGARCHY 2 STATE 6a TYRANNY 2a 4a and for the comparison of monarchy with domestic or despotic government *see* FAMILY 2b GOVERNMENT 1b TYRANNY 4b

Another discussion of government in relation to the wealth and territorial extent of the state *see* STATE 4a–4c WEALTH 9f

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The controversy concerning the legitimacy or justice of absolute monarchy and for the statement of the issue in terms of the doctrine of natural rights and popular sovereignty *see* CONSTITUTION 3b DEMOCRACY 4b GOVERNMENT 1g(1)–1g(3) JUSTICE 9c–9d LAW 6b 7b LIBERTY 1d 1g STATE 2c TYRANNY 5a–5c

Matters relevant to the justification of absolute rule when it takes the form of a benevolent despotism *see* DEMOCRACY 4d GOVERNMENT 2c PROGRESS 4b SLAVERY 6b–6c TYRANNY 4b

The issues concerning imperialism as a form of absolute rule *see* GOVERNMENT 5b LIBERTY 6c REVOLUTION 7 SLAVERY 6d STATE 10b TYRANNY 6

ADDITIONAL READINGS

Listed bel w e wo ks not incl ded in G at *Books of the W estern World* but relevant to the idea and topics w th which this chapter deals These o ks are di ided nto two g oups

I Wo ks by authors r presented n this coll ct on
II Wo ks by authors n t rep esented in th collection

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Chapter 60 NATURE

INTRODUCTION

NATURE is a term which draws its mean ing from the other terms with which it is associated by implication or contrast Yet it is not one of a fixed pair of terms like neces sity and contingency one and many universal and particular war and peace When things are divided into the natural and the artificial or into the natural and the conventional the op posite of the natural does not represent a loss or violation of nature but rather a transformation of nature through the addition of a new factor The unnatural on the other hand seems to be merely a deviation a falling away from or sometimes a transgression of nature

Most of the terms which stand in opposition to nature represent the activity or being of man or God As appears in the chapter on MEDICINE Galen thinks of nature as an artist Harvey later develops this notion But with these two exceptions the traditional theory of art conceives it not as the work of nature but of man Despite other differences in the great books on the theory of art especially with re gard to art s im tation of nature there seems to be a common understanding that works of art are distinguished from productions of na ture by the fact that man has added something to nature A world which man left exactly as he found it would be a world without art or any trace of the artificial in it

The ancient authors who contrast the natural and the conventional and the modern authors who distinguish man s life in a state of nature from his life in civil society seem to imply that without something done by man there would be nothing conventional or political. Locke appears to be an exception here He thinks that there is a natural as well as a civil or political society Natural society is the society of men living together according to reason without a common superior on earth with authority to judge between them Unlike Hobbes or Kant or Hegel Locke does not think that the state of nature is necessarily a state of war But this difference between Locke and others does not affect the point that the political institutions of civil society are things of man s own devising

There may be among the social inse ts na tural organizations such as the bee hive and the ant mound It may even be as Locke sup poses that in a state of nature men living together according to reason would constitute a society But in neither case does the society we call a state result States differ from one another in many features of their political organization In this sense the state or political community is conventional rather than natural its institutions are humanly contrived

The social contract theory of the origin of the state is not necessarily involved in the recognition that the state is partly conven tional Aristotle for example who regards the state as natural—he speaks of it as a creat on of nature —does not think of the political community as natural in the sense in which a bee hive is natural That men should form political communities is in his view the result of a natural desire a tendency inherent in the nature of man as a political animal But what form the political community will take is at least partly determined by the particular ar rangements men voluntarily institute Man made laws are conventional but so also are other institutions which vary from state to state or change from time to time

THE ISSUES IN political theory raised by any consideration of what is and is not natural about society or the state a e d s ussed in other chapters e g FAMILY nd STATE What is true in this connection is likely to be true of each of the other fundamental oppositions in which

the notion of nature is involved The issues raised by the relation of art to nature are for example considered in the chapter on ART those raised by the distinction between nature and nurture are considered in the chapter on HABIT and so on Here we are concerned not with the theoretical consequences of different conceptions of nature but with the various meanings of the term itself as it is used in different contexts

Common to all meanings is the notion that the natural is that which man s doing or making has not altered or enlarged The distinction between nature and nurture confirms this Man s activities are the source of modifications in his own nature as well as in the nature of other things The human nature man is born with undergoes transformations in the course of life the acquirement of knowledge the formation of habits (which are often called second nature) the modification of instincts The sum of these changes represents what nurture adds to nature

When changes of this sort are looked at collectively they give rise to the notions of culture or civilization—two more terms which present a contrast to nature In Rousseau and others we meet the feeling that man may have lost not gained by exchanging the natural for the civilized life The ideal of a return to nature involves more than a return to the soil or an exodus from the city to the country In its most radical form this ideal calls upon man to divest himself of all the artifices and conceits with which he has thought to improve on nature—by renouncing its advances Rousseau says in order to renounce its vices

But why it may be asked is the whole world which man creates not as natural as the materials which man finds to work with—the resources of physical nature and the native equipment which is man s nature at birth? If man himself is a natural entity and if all human activities are somehow determined by human nature then why are not the works of art and science the development of political institutions the cultivation of human beings by education and experience and all other features of civilization—why are not all these just as natural as the falling stone the flourishing forest or the bee hive? Why in short should there by any contrast between the works of nature and the works of man?

THIS QUESTION points to one of the fundamental issues in the traditional discussion of nature Those who uphold the validity of the contrast defend its significance in terms of something quite special about human nature If man were entirely a creature of instinct—if everything man did were determined by his nature so that no choices were open to him and no deviation from the course of nature possible—then the human world would seem to fade into the rest of nature Only on the supposition that man is by nature rational and free do those human works which are the products of reason or the consequences of free choice seem to stand in sharp contrast to all other natural existences or effects of natural causes

Of these two factors—rationality and freedom—the element of freedom is usually the one most emphasized The line is drawn between that which natural causes determine and that which man determines by his own free choice The laws of nature are often conceived as expressing an inherent rationality in nature itself but they also state the uniformity of nature s operations Such maxims of nature as nature does nothing in vain nature abhors a vacuum or nature does nothing by jumps are usually interpreted as describing nature s invariable way of doing things Aristotle s distinction between things which happen naturally and those which happen by chance turns on the regularity of the events which result from causes in the very nature of things The natural is that which happens either always or for the most part

Hence even if there is rationality of some sort in the structure of nature that supposition does not seem to affect the position of those who connect human reason with human freedom and who in consequence divide the things which happen as a result of man s free choice from everything else which happen in the course of nature This may be exemplified by the Greek understanding of the difference between nature and convention The laws of Persia vary from the laws of Greece the political institutions of the city states vary from those of the Homeric age customs and constı

tutions differ from city to city Unlike such conventions that which is by nature Aris totle writes is unchangeable and has every where the same force as fire burns both here and in Persia The conventional is the vari able the natural the uniform The variability of conventions moreover seems to suggest that they are products of freedom or choice

The difference between the bee hive and the human city is that one is *entirely* a creation of nature a social organization entirely deter mined by the instincts of the bees so that wherever bees form a hive it is formed in the same way whereas the human city involves something more than a natural desire of men since when these political animals associate in different places they set up different forms of government and different kinds of law The same comparison can be made between the spider s web or the beaver s dam and such products of human art as cloth and houses The variability of the works of reason as opposed to the uniformity of instinctive productions of all sorts implies the factor of choice in reason s work

THE CONCEPTION OF nature which tries to separate the natural from what man contributes thus seems to depend upon the conception of man Controversies concerning man s difference from other animals especially the dispute about human freedom (considered in such chapters as MAN and WILL) bear directly on the issue of the naturalness of the things which result from man s doing and making

Spinoza for example in holding that human actions constitute no exception to the reign of necessity throughout nature removes any ground for distinguishing the effects of human operation from other effects Man exercises no freedom of choice nor does man in any other way introduce a new principle into the o der or process of nature Hobbes and Locke concur in the deni l of free will but they separate the inventions of man s mind or his social institu tions from what happens without human con trivance in the realm of thought or action The difference between simple and complex ideas for Locke seems to parallel the ancient distinc tion between nature and art

At the other extreme f om Spinoza Kant separates the order of nature and the order of freedom into worlds as radically asunder as the Cartesian realms of matter and mind The world of nature is the system or order of the objects of sense— the sum total of phe nomena insofar as they are connected with each other throughout For Kant this means two things which are strictly correlative Na ture is the object of the theoretic sciences and it is also the realm of time space and causality Like Spinoza Kant identifies the order of na ture with the order of causal necessity But unlike Spinoza Kant places the moral and po litical life of man in an order unconditioned by time space and causality This realm of free dom is the sphere of the moral or practical sciences The natural or theoretic sciences do not extend to what Kant calls the supersen sible or the noumenal order—the world of things lying outside the range of sense experi ence

There is an alternative to Spinoza s location of all events within the order of nature and to Kant s separation of the realm of nature from the domain of freedom It takes the form of Aristotle s or Aquinas distinction between the natural and the voluntary The voluntary is in one sense natural in another not It is natural in the sense that what happens voluntarily in the realm of animal and human motions pro ceeds from causes as natural as those responsible for the motions of inert bodies A voluntary act according to Aquinas comes from an in trins c principle just as the falling of a stone proceeds from a principle of movement in the stone But among the factors respons ble for voluntary acts is knowledge of the end — knowledge of the object being sought The sphere of the voluntary can therefore be equat ed with the sphere of conscious desi e *i e* with desire aroused by an object known wheth er known by sense or reason The natural in the sense in which it is distinguished from the voluntary is the sphere of motions in line with natural desire *i e* with tendencies founded in the very nature of a body or organism and un accompanied by any awareness of the goal toward which it is thus inclined to move

Ari totle s d stinct on between n tural and violent motion (which Galileo and other phys icists adopt) seems to throw light on a double

use of the term natural h re Galileo treats the motion of a freely falling body as natural in contrast to the motion of a projectile In the former case it is the nature of heavy bodies to gravitate toward the earth whereas in the latter case in addition to the motion of gravitation another motion is imparted to the body when it is shot from a gun—a motion which does not proceed from the body s own nature but is caused by the motions of other bodies In terms of this distinction voluntary motions are natural rather than violent In fact the violent is sometimes thought to be even more opposed to the voluntary than to the natural in the sense that a man acting contrary to his will under external coercion suffers violence When he does what he wishes his conduct is not only voluntary but natural *i e* free from the violence of external forces

It is necessary to consider the additional distinction between the voluntary and the free Animals acting from desires caused by the perception of certain objects act voluntarily but in the theory of Aristotle and Aquinas only men freely choose among alternative objects of desire or between means for accomplishing an end The effects of voluntary action differ from other natural events only because knowledge enters into their determination But that which happens as the result of man s free choice is determined neither by his nature nor by his knowledge Hence whatever comes into existence through man s choice stands apart from all that is naturally determined to exist

One other matter bears on this consideration of the natural in relation to the voluntary and the free Spinoza excludes the operation of final causes as well as free choice from the order of nature Purposes or ends are not principles of nature Aristotle on the other hand thinks that final causes are operative in every part of nature He finds them in the sphere of inert bodies which naturally tend toward certain results He finds them in the sphere of animal and human motions where the final cause or end may be an object of conscious desire

So far as the search for causes is concerned nature presents the same kind of problems to the physicist as to the biologist or psychologist In only one sense are final causes peculiarly present in human conduct that is the sense in which the change effected is not the ultimate end but only a means to some further end desired Here there is an extrinsic final cause as well as a final cause intrinsic to the change itself It may be with regard to this special sense that Bacon says of final causes that they are more allied to man s own nature than to the system of the universe Yet Bacon far from denying their presence in the scheme of things assigns the investigation of final causes to metaphysics (as a branch of natural philosophy) rather than to physics For him the ascertainment of final causes does not discover a purpose in the nature of things Rather it looks to God s plan and providence

We have so far dealt with that consideration of nature which opposes the natural to the works of man The discussion of nature also moves on a theological plane Here on one traditional view the natural is not opposed to, but rather identified with the work of God.

Things which are said to be made by nature Plato writes are the work of divine art Those who conceive the universe as God s creation and think of God alone as uncreated being tend to use the word nature collectively for the whole world of creatures and distributively for each type of thing which has its being from God

The distinction between the supernatural and the natural has many interpretations in Christian theology but none more basic than that which divides all being into the uncreated and the created On this view the order of nature includes more than the world of physical sensible things It includes the spiritual creation—angels and souls—as well Immaterial beings are no more supernatural than bodies. They too are created natures Only God is uncreated being

Those who do not have or who deny a doctrine of creation use the word nature in a *less* and in a *more* comprehensive sense The Greek philosophers for example seem to restrict the natural to the physical *i e* to the realm of material sensible changing things. Change is an element in the connotation of the Greek word *phusis* of which *natura* is the Latin equivalent As Greek scientists conceive the

study of nature it is the business of physics to investigate the principles causes and elements of change

Things which are thought to be untouched by chan e such as the objects of mathematics self subsistent ideas or separate forms or things which are thought to be eternal and im mutable such as immaterial substances or in telligences, do not belong to the realm of phys ics or *natural* science In Aristotle s classification of the sciences such beings are the objects of mathematics and metaphysics or theology Since for him whatever is both sensible and mutable is also material the realm of nature includes no more than the whole material uni verse celestial as well as terrestrial

The *more* comprehensive sense of nature appears in Spinoza s identification of nature with the infinite and eternal substance of God Be sides God says Spinoza no substance can be nor be conceived Whatever is is in God and nothing can either be or be conceived without God All finite things are modes of the divine substance or more precisely of the attributes of God such as extension and thought Nature therefore is the totality of finite things both material and immaterial But na ture *exceeds even this totality for the* infinite substance of God is greater than the sum of its parts

To make this clear Spinoza employs the distinction between *natura naturans* and *natura naturata* By *natura naturans* we are to under stand that which is in itself and is conceived through itself or those attributes of substance which express eternal and infinite essence that is to say God in so far as He is considered as a free cause But by *natura naturata* I understand everything which follows from the necessity of the nature of God or of any one of God s attributes in so far as they are considered as things which are in God and which without God can neither be nor be conceived

Viewed under the aspect of time rather than eternity the order of nature (*i e natura na tur ta*) is as much an order of ideas as it is an order of things The order and connection of ideas is the same as the order and connection of things Spinoza writes Whether we think of nature under the attribute of extension or un der the attribute of thought or under any other attribute whatever we shall discover one and the same order or one and the same con nection of causes

Except perhaps for the Stoics like Marcus Aurelius and Epictetus Spinoza seems to stand alone in this conception of nature as all embrac ing *The Stoics too regard nature as the* system of the universe with man a part of its cosmic structure and with God or divinity inherent in nature as the rational principle governing all things But with or without reference to God and creation thinkers like Descartes and Hume tend to identify nature not with the totality of finite things but with the world of bodies in motion or changing sensible things

For Descartes nature does not include the realm of thought or thinking substances though these like bodies are finite and dependent creatures of God For Hume nature seems to be that which lies outside experience—in a way the reality which underlies appearances Where Spinoza thinks that the system of ideas is as much a part of nature as the system of bodies in motion Hume speaks of a kind of pre established harmony between the course of na ture and the succession of our ideas

Hume s distinction between knowledge of *the relation between our own ideas and knowl* ed e of matters of fact or real existence seems furthermore to imply that nature is the reality known (however inadequately) when we assert certain things to be matters of fact Here we perceive another meaning of nature defined by another basic opposition this time between the real and the ideal or the imaginary It is in this sense that mediaeval writers oppose *entia naturae i e* natural or real beings to *entia rationis* or things which have their being in the mind

THIS DISTINCTION like most of the others in which nature is concerned does not have uni versal acceptance Kant as we have seen far from making nature the reality which exists independently of our experience or knowledge conceives the realm of nature as identical with all possible experience We possess two ex pressions Kant writes *world* and *natu e* which are generally interchanged The first denotes the mathematical total of all phenom ena and the total ty of their synthesis And

the world is termed nature when it is regarded as a dynamical whole—when our attention is not directed to the aggregation in space and time but to the unity in the *existence* of phenomena

On quite different principles of analysis Berkeley also treats as natural things the ideas or sensations which are not produced by or dependent on the wills of men Natural beings do not exist apart from the mind but unlike imaginary ones natural beings are those ideas which are not subject to our will or the human mind s own constructive activities Such ideas are produced in our minds immediately by God

To the question whether Nature hath no share in the production of natural things Berkeley answers If by *Nature* is meant the visible series of effects or sensations imprinted on our minds according to certain fixed and general laws then it is plain that Nature taken in this sense cannot produce anything at all But if by *Nature* is meant some being distinct from God as well as from the laws of nature and things perceived by sense I must confess that word is to me an empty sound without any intelligible meaning annexed to it Nature in this acceptation is a vain chimera introduced by those heathens who had not just notions of the omnipresence and infinite perfection of God

Berkeley s view represents one extreme position on a theological issue of the utmost difficulty According to him God is not only the creator or first cause but the sole cause of everything which happens in the course of nature There are no natural causes Nature has no productive power Everything is the work of God or the work of man—nothing the work of nature

Within the limits of this issue the other extreme consists in denying not the creativity of God but the role of divine causality in the production of natural effects It relegates them entirely to the efficacy of natural causes Lucretius, of course denies both the creation of the world and the intervention of the gods in the processes of nature But others like Descartes seem to say that once God has created the physical world once He has formed matter into bodies and given them their initial impetus their motions henceforward need only the laws of nature which God laid down for them to follow For everything that happens in the course of nature natural causes operating under these laws suffice

There is a third position which distinguishes between the work of God in the creation of nature and the work of nature in the production of effects of all sorts such as the natural motions of bodies or the propagation of animals But though it ascribes efficacy to natural agents or second causes in the production of natural effects it also regards natural causes as instrumental to the hand of God the first or principal cause of everything which happens as well as of everything which is Aquinas seems to hold that God acts alone only in the original creation of things whereas in the preservation of created natures and in their causal interaction God works through secondary or natural causes

Some have understood God to work in every agent Aquinas writes in such a way that no created power has any effect in things, but that God alone is the immediate cause of everything wrought for instance that it is not fire that gives heat but God in the fire and so forth But this is impossible First because the order of cause and effect would be taken away from created things and this would imply a lack of power in the Creator Secondly because the operative powers which are seen to exist in things would be bestowed on things to no purpose if things produced nothing through them We must therefore understand that God works in things in such a manner that things have also their proper operation

In other words according to Aquinas God is the cause of action in every agent Furthermore God not only moves things to operate but He also gives created agents their forms and preserves them in being With regard to the being of things Aquinas holds that God established an order among things so that some depend on others by which they are conserved in being though He remains the principal cause of their conservation

With regard to nature itself this theological doctrine raises two sorts of problems The first concerns the efficacy of natural causes,

which are sufficient for the scientist to appeal to in explaining natural phenomena yet are insufficient by themselves for the production of natural effects The second concerns the distinction between the natural and the super natural now not in terms of the created and the uncreated but in terms of what happens naturally (or even by chance) as opposed to what happens as a result of God s intervention in the course of nature

Miracles, for example are supernatural rath er than natural events They are not pro duced by natural causes nor do they happen by accident They are attributed by the theo lo ian to di ine causality yet not in such a way that violence is done to nature. The term *miracle* Aquinas explains is derived from admiration which arises when an effect is manifest whereas its cause is hidden A miracle is so called as being full of wonder in other words as having a cause absolutely hid den from all This cause is God Therefore those things which God does outside the causes which we know are called miracles

The miraculous is that which is beyond the power of nature to accomplish A thing is said to be above the ability of nature Aquinas writes not only by reason of the substance of the thing done but also because of the man ner and th order in which it is done and the more the power of nature is surpassed the greater the miracl Aquinas distinguishes three grades of miracles

The first he says surpasses nature in the substance of the deed as for example if two bod es occupy the same place or if the sun goes backwards or if a human body is glorifie l Su h things nature is absolutely unable to do and these hold the highest rank among mir acles Secondly a thing surpasses the power of nature not in the deed but in that herein it is done as the raising of the dead and giving sight to the blind and the lik For nature can give lif but not to the dead and it can give sight but not to the blind Such hold the second rank in miracles Thirdly a thing ur passes nature s power in the measure and order in which it is done as when a man is cured of a fever suddenly by God without treatment or the usual process of nature These hold the lowest place in miracles

Though each of these kinds has various de grees according to the different ways in which the power of nature is surpassed no miracle according to Aquinas transgresses the order of nature in the sense of accomplishing the im possible Unlike the impossible which would destroy nature the improbable can be elicited by God s power within the general framework of nature

Hume on the other hand thinks that a miracle is a violation of the laws of nature And since in his view a firm and unalterable exp rience has established these laws the proof against a miracle *from the nature of the fact* is as entire as any argument from experience can be Why is it more than probable he asks that all men must die that lead cannot of itself remain suspended in the air that fire con sumes wood and is extinguished by water un less it be that these events are found agreeable to the laws of nature and there is *required* a violation of these laws or in other words a miracle to prevent them?

Nothing is esteemed a miracle Hume con tinues if it ever happens in the common course of nature Th re must therefore be a uniform experience against *every miraculous* event otherwise the event would not merit that appellation And as a uniform experience amounts to proof there is here a direct and full *proof* from the nature of the fact against the existence of any miracle nor can su h a proof be destroyed or the miracle rendered credible but by an opposite proof which is superior

Hume does not think that miracles can be proved against our uniform experience of the order of nature But he also thinks that they are dangerous friends or disguised enemies to the *Christian religion* who would try to defend its beliefs by the principles of human reason

The *Christian religion not only was at first* attended ith miracles he declares but even at th s day cannot be bel eved by any reason able person without one Mere reason is in sufficient to conv nce us of its veracity and whoever is moved by *Faith* to assent to it s conscious of a continu d miracle h s o n person which gives l im a determ nation to believe what is most contrary to c istom and experi n e

ONE OTHER TRADITIONAL conception of natur implicit in much of the foregoing should be noted The various senses of the term so far explicitly considered are alike in this that they justify the use of the word Nature with a capital N and in the singular This other sense of the term appears when we speak of each thing as having a nature of its own and of the world as containing a vast plurality and radical diversity of natures

In this sense we attribute a nature even to things which are contrasted with Nature and the natural We speak of the nature of God and the nature of freedom the nature of art the nature of reason the nature of ideas the nature of the state the nature of customs and habits *This could of course imply a theory that things which are not completely natural* nevertheless have a natural basis as art the state or habit Another meaning however seems to be involved

The phrase nature of' appears almost as frequently in the great books as the word is and frequently it is unaccompanied by any explicit theory of Nature or the natural The discussion of the *nature of* anything seems for the most part to be a discussion of *what* it is To state the nature of anything is to give its definition or if for any reason definition in a strict sense cannot be given then the attempt to state the nature of the thing consists in trying to say what characterizes this thing or kind *of thing in distinction from everything* else or all other kinds

Enumerating the senses of the term nature Aristotle gives this as the fifth meaning The *first four comprise senses which distinguish the* natural from the artificial or the immutable and which indicate that the natural or the physical has an immanent principle of movement in itself and involves matter or potency The fifth sense is that in which nature means the *essence* of natural objects and as he goes on to say this implies the presence in them of *form* as well as *matter* By an extension of meaning from this sense of nature every essence in general has come to be called a nature because the nature of a thing is one kind of essence This is the sixth and most general sense according to which the nature or essence of anything is the object of definition

Does each individual thing have a nature peculiarly its own even if it cannot be defined? Or is a nature or essence always something common to a number of individuals accordin to which they can be classified into kinds and the kinds ordered as species and genera? Do John and James for example have individual natures in addition to the *common nature which they share through belonging to the* human species and does their human nature entail certain properties which are generic rather than specific *i e* which seem to be determined by their having the generic nature common to all animals as well as the specific nature common to all men?

Such questions about individual specific and generic natures raise problems of definition and classification which are discussed in the chapter on EVOLUTION They also raise problems about the existence or reality of the kinds which men define and classify Are they merely what Locke calls nominal essences or do our definitions signify real essences *i e* the natures *of things as they really are? Is the real world* one which as William James says plays right into logic s hands ? Does Nature consist of a *hierarchy* of natures or distinct kinds or is it a *continuum* of things all having the same nature and differing from each other only individually or accidentally but not essentially? These problems are discussed elsewhere in such chapters as ANIMAL DEFINITION EVOLUTION LIFE AND DEATH and SAME AND OTHER

OUTLINE OF TOPICS

REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page **12**.

PAGE SECTIONS: When the text is printed in one column, the letters a and b refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page **116** and ends in the lower half of page **119**. When the text is printed in two columns, the letters a and b refer to the upper and lower halves of the left-hand side of the page, the letters c and d to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page **163** and ends in the upper half of the right-hand side of page **164**.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; e.g., *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; e.g., OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. Conceptions of nature

1a. Nature as the intrinsic source of a thing's properties and behavior

7 PLATO: *Cratyl* **105a-d**

8 ARISTOTLE: *Physics*, BK C 1 **59a-b**; BK II, C 1 **268b-d 270a** / *Metaphysics*, BK V, C 4 **534d-535c**; C [1019ᵃ 4] **540a**; BK IX, CH 8 [1049ᵇ4-11] **575b** / *Soul*, BK I 4 [415ᵇ8-416 8] **645d-646c**

9 ARISTOTLE: *Parts of Animals*, BK I, C 2 [1252ᵇ30-34] **446a-b** / *Rhetoric*, BK I, C 0 [1369ᵃ31-ᵇ5] **612c-d**

10 GALEN: *Natural Faculties*, BK I, CH 1 **167a-b**; C 12 **172d-173c**; BK II, C 3 **185a-186d**

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 3 **16a-d**; Q 18, A 3, ANS **106b-107c**; Q 2, A 1, REP 4 **162a-163b**; Q 39, A 2, ANS and REP 3 **203b-204c**; Q 6, A 2, ANS **311a-d**; Q 115, A 2, ANS **587c-588c**

20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 1 **710a-711c**; Q 17, A 2, ANS and REP 4 **808d-809d**

28 HARVEY: *On Animal Generation*, **384d-390b** passim; **428a-d**

30 BACON: *Novum Organum*, BK I, A 4 **137d-138b**

31 DESCARTES: *Discourse*, PART V **60b** / *Meditations*, III **83c-d**; **90a-b**; V **93b-c**; VI **99c-100d** / *Objections and Replies*, **120b-12 c**

31 SPINOZA: *Ethics*, PART IV, PROP 18, COROL; PROP 19 **429a-d**; PROP 37, SCHOL 1 **434d-4 5b**

35 LOCKE: *Human Understanding*, BK II, CH XXIII, SECT 3 **204c-d**; SECT 8 **206a-b**; CH XXXI, SECT 6 **240d-241d**; SECT 11 **242d-243**; SECT 13 **243a-b**; CH XXXII, SECT 24 **247c-d**; BK III, CH III, SECT 15-19 **258b-260a**; CH VI **268b-283a** passim, esp SECT 2-3 **268c-d**; CH IX, SECT 12 **287d-288a**

35 BERKELEY: *Human Knowledge*, SECT 101-103 **432c-433a**

42 KANT: *Pure Reason*, **133b** [fn 1]

46 HEGEL: *Philosophy of History*, INTRO **165b-c**

49 DARWIN: *Origin of Species*, **9 10d** passim

1a(1). The distinction between essential and individual nature: generic or specific properties and individual contingent accidents

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 4 **100a-101b**; BK I, C 1 3 **123c-124c** / *Topics*, BK V, CH 3 [13 ᵇ19-37] **182b-c** / *Physics*, BK II, CH 1 [192ᵇ33-39] **269** C, [193 22-29]

275b c BK VII CH 3 [46b3-9] 329c d / Generation and Corruption BK II CH 11 [337b12-19] 440d-441a c / Metaphysics BK III CH 1 [995b27 31] 514b CH 3 517a 518a BK V CH 6 536a 537c CH 8-9 538b 539a CH 10 [1018 38-b8] 539b c CH 30 547a d BK VI CH 10-15 558a 564c BK X CH 1 [1052a28 37] 578d CH 3 [1054 30-1055 3] 581a d CH 8-9 585b 586c BK XI CH 1 [1 59b21 1060 1] 587d 588a

9 ARISTOTLE History of Animals BK I CH 1 [486 5 487a1] 7b d / Generation of Animals BK V CH 1 [778 15 b19] 320a 321a

12 LUCRETIUS Nature of Things BK I [449-482] 6 7a

17 PLOTINUS Second Ennead TR III CH 12 46

19 AQUINAS Summa Theologica PART I Q 3 A 3 16a d A 4 ANS 16d 17c Q 9 A 2 ANS 39c 40d Q 13 A 9 ANS 71b 72c Q 39 A 2 ANS 203b 204c Q 41 A 5 222b 223b Q 119 A 1 ANS and REP 2 604c 607b PART I II Q 2 A 6 ANS 619d 620d

20 AQUINAS Summa Theologica PART I II Q 49 A 2 ANS 2b-4a Q 51 A 1 ANS 12b 1 c Q 85 A 6 182d 184a PART III Q 2 A 1 REP 2 710a 711 A 2 ANS 711d 712d PART III SUPPL, Q 81 A 3 REP 3 966a-c

35 LOCKE Human Understanding BK III CH III SECT 6-20 255c 260a CH VI SECT 32 277 278b

38 ROUSSEAU Inequality 341 342b passim

49 DARWIN Origin of Species 28b 29a

1a(2) Nature or essence in relation to matter and form

8 ARISTOTLE Physics BK II CH 1 [193 9 b21] 269b 270a CH [194 11 b15] 270c 271a CH 8 [199 30-33] 276c CH 9 277b 278a c / Metaphysics BK II CH 3 [995 15 17] 513d BK V CH 4 [1014b 10 5 19] 535a BK VI C [1025b28 o 6 6] 547d 548a BK VII C 7 11 555a 561a BK VII C 16-BK VIII C 6 564 570d BK X CH 8 1 585b 586d BK XI CH 7 [1064 19-28] 592 K X 1 CH 3 [10 o9 13] 599b / Soul BK I CH 1 [403a2 b19] 632a d BK I CH 4 [415b8 416 18] 645d 646

9 ARISTOTLE Parts of Animals BK I CH 1 [64 14 33] 163d 164b [642 14 24] 165b

10 GALEN Natural Faculties K CH 5 169b c BK II C 1 3 185a 186d

12 AURELIUS Meditations BK VII SECT 23 281b BK XI SECT 1 286b

17 PLOTINUS Fourth Ennead TR 1 CH 9-12 146d 149b

19 AQUINAS Summa Theologica PART I Q 3 A 3 ANS 16a d 4 ANS 16d 17c Q 18 A 3 ANS 106b 107c A 4 REP 3 107d 108c Q 9 A 1 ANS 108d 109c Q 29 A 1 RE 4 162a 163b A 2 REP 3 163b 164b Q 39 A 2 AN 203b 204 Q 45 A 8 249b 250a PART I II Q A 3 ANS 611b-612a A 5 AN 613a 614a

20 AQUINAS Summa Theologica PART I II Q 85 A 6 182d 184a PART III Q 2 A 1 ANS and REP 710a 711c A 2 ANS 711d 712d PART III SUPPL, Q 80 A 4 ANS and REP 1 959 963a

30 BACON Novum Organum BK II APH 4 137d 138b APH 29 159b c

42 KANT Pure Reason 186b-d

1b Nature as the universe or the totality of things the identification of God and nature the distinction between natura naturans and natura naturata

12 LUCRETIUS Nature of Things BK I [418 482] 6b 7a [951 1051] 12d 14a BK II [294 307] 18d 19a

12 EPICTETUS Discourses BK I CH 14 120d 121c

12 AURELIUS Meditations BK SECT 1 2 6b d SECT 3 257a b BK IV SECT 9 266a SECT 40 267a b BK V SECT 8 269d 270b SECT 3 273a BK VI SECT 36-45 277c 278c BK VII SECT 9 280b c SECT 19 281a SECT 25 281 SECT 75 285c BK X SECT 8-9 292b d BK X SECT 6-7 297a-c BK X SECT 8 304b 305b BK X SECT 30 310a b

17 PLOTINUS Third Ennead TR C 1 16 90c 91c TR VI 1 CH 1 4 129a 131a / Fourth Ennead TR V CH 36-3 178c 179b

31 DESCARTES Meditations VI 99c

31 SPINOZA Ethics PART I DEF 3-6 355b AXIO 1 1 3-5 355d PROP 5-6 356b c PROP 8 356d 357d PRO 10 358a b RO 14 16 359d 362a PROP 18 363c PRO 24 365a PROP 25 COROL 365b PROP 28 31 365c 367a PROP 33 367b 369a ART II PROP 1- 373d 374a PRO 6-7 374d 375c PRO 9- 0 376a 377a PART IV PREF 422b d 424a AXIO 424c RO 2 425a PRO 4 425b d APPENDIX 1 447a VII VIII 447d

42 KANT Judgement 564c 565d esp 565c d 566c d 580 d

46 HEGEL Philosophy of History INTRO 176b-c 186d 190b c PART I 220 221a 245d 246c ART II 263d 265c

47 GOETHE Faust PART [430-521] 12b-15a

48 MELVILLE Moby Dick 115b 117a 140a

49 DARWIN Origin of Species 40d

51 TOLSTOY War and Peace BK V 216d 218b BK X 581c 582a BK XIV 608a b BK XV 631a c

1c Nature as the complex of the objects of sense the realm of things existing under the determination of universal laws

42 KANT Pure Reason 5d 6c 15b c 25b 26b 29d 33d esp 32c 33a 49c 51d esp 51 d 88b 91d 109d 110d 133a c p 133b [fn 1] 195a 200c 209b esp 204c 20 a / Fund Prin Metaphysic of Moral 281 282d 283b 285c d / Intro Metaphysic of Moral 387 b / Judgement 550a 551a 562a b 562d 563b 574b-577a 581a b

2 The antitheses of nature or the natural

2a Nature and art the imitat on of nature co operat on with nature

5 AESCHYLUS *Prometheus Bound* [442-506] 44c 45a
5 SOPHOCLES *Ant gone* [332-375] 134a b
5 EURIPIDES *Suppl ant* [195 218] 260a b
7 PLATO *Go gia* 260a 262a / *Rep bl c* BK II-III 320c 334b BK X 427c 434c / *Critia* 478a d / *S ph t* 561b d 577d 578d / *Laws* BK II 660a 662a K X 760a b
8 ARISTOTLE *P ster o A ialytic* BK II CH II [95 3-9] 129d / *Pl ys c* BK II C I 1 268b d 270a CH 2 [194 2 b 3] 270c 71a CH 8 [99 8-b33] 276b 277a / *Generat on and Co rption* BK II CH 9 [335b18 336 13] 437b d / *M t o ology* BK IV H 2 [390b2-14] 494c / *Metaphy i s* BK I CH 6 [988] 506a BK VI CH I [025b19-25] 547d BK VII CH -9 555a 558a BK VIII CH 3 [1043b19-23] 568a b BK XI CH 7 [1064 10- 6] 592b c BK XII C 3 [1 0 4-8] 599b / *S ul* BK II CH I [412b10-18] 642c d
9 ARISTOTLE *Pa ts of An mal* BK I CH I [639b12-640 33] 161d 162d [641b13 29] 164c d / *Gener t n f Animals* BK I CH 21 22 269c 271a BK II CH I [734 17 735 4] 274c 275c c 6 [43b20-25] 285a BK IV C I 6 [775 1 3] 317b / *Ethic* BK VI CH 4 [1140a11 17] 388d / *Pol t* BK V I CH 14 [1333 6-23] 538a C I 17 [1336b39-1337a2] 542a c BK VIII CH 5 [1339b42 134 b18] 545c 546a / *Rheto i* BK III CH 2 [404b2 26] 654c 655a / *Po tic* CH 4 [1448b4 23] 682c d [449 19 27] 683b CH 24 [1459b17 1460 4] 695d-696a
10 HIPPOCRATES *Su gery* par 15 73b c / *F ac tur* par 1 3 74b d 76a
10 GALEN *Natu al Facult e* BK I C I 7 170c 171a C I 2 172d 173c K II CH 3 185a 186d CH 6 189a 190a
12 LUCRETIUS *Natu f Th ng* BK V [823-857] 55a b BK V [1361 389] 78d 79a
12 AURELIUS *M d at on* BK II SECT 2 259d 260a BK VI SECT 40 277d BK X ECT 10 303b c
13 VIRGIL *Geo g c* 37a 99a esp I [118 159] 40a 41b
17 PLOTINUS *Third Enn ad* TR VI I CH 2 129b c / *Fou th Enn ad* TR III CI 10 147c d TR IV CH 31 174d 175a / *F fth E nead* TR VIII C I 239b 240a
18 AUGUSTINE *Christ an Doct ne* BK II CH 30 651c d
19 AQUINAS *Summa Theol gica* PART I Q 8 A 3 ANS 106b-107c Q 45 A 2 AN 242d 244a Q 91 A 3 ANS 486b-487d Q 93 A 2 RE 4 493a d Q 103 A I REP 3 528b 529a Q 104 A I ANS 534c 536c Q 110 A 2 R P 3 565d 566d PART I II Q I 6 AN 614a c Q 2 A I 615d 616c Q 12 A 3 CONTR RY 670d 671b
20 AQUINAS *S n ma Treol gica* PART I II Q 51 A I ANS 12b 13c PART III SUP L Q 9 A I REP 4 951b 95 b A 2 R P 2 4 953b-955c Q 80 A I ANS 956c 957c A 2 ANS 957c 958b
21 DANTE *D ine Comedy* HELL XI [91 111] 16a b PURGATORY X [22 99] 67c 68b esp [28 33] 67d PARADISE XXVI [124 138] 147a b XXVII [88-96] 148b
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23 HOBBES *Leviathan* INTRO 47a b PART II 262c
25 MONTAIGNE *E ay* 52c d 93b d 216c 219a 368d 369a 527d 529b
27 SHAKESPEAR *Haml t* ACT III SC II [1 39] 49a b / *K ng Lea* ACT IV SC IV [1 15] 272b c / *T mon of Athens* ACT I SC I [56-160] 395b c / *Winter s Tale* ACT IV SC IV [79-103] 508c d
28 HARVEY *On An mal Generation* 335a c 400d 401a 428a c 443d 444c esp 444b c 450c 492a b
29 CERVANTES *Don Qu xote* PART I 184a 187c I RT II 251d 252a
30 BACON *Advancement of Learning* 34b / *No um O ganum* BK I APH 3 4 107b APH 66 114d 115c BK II APH 4 137d 138b APH 29 159b c APH 41 173d 174b / *Ne Atlantis* 203a b
31 DESCARTES *Med tations* I 76a b
32 MILTON *Paradise Lost* BK V [291 297] 181b
33 P CAL *P n ées* 21 175a 29 176a 32 176a b 120 195a / *Ge n trical Demonstration* 437a
35 LOCKE *H man Understand ng* BK III CH VI SECT 4 280a b
36 STERNE *T stram Shandy* 195b 196a
37 FIELDING *Tom Jone* 243a b
38 ROUSSEAU *P litical Economy* 368d 369a / *S c al C nt act* BK III 419c d
39 SMITH *W alth of Nat ons* BK II 157a b
40 GIBBON *D clin and Fall* 663d 664a
42 KANT *Pu e R a on* 188c 189a / *Judgement* 495a-495c 521b 524b esp 523c d 525a 528c esp 527b 528c 557c 558b
43 FEDERALIST NUMBER 14 61d
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46 HEGEL *Ph lo ophy of R ght* PART I par 56 26b / *Philo ophy f H t ry* INTRO 165b-c PART I 244b c PART II 263d 265c 267b-268b
47 GOETHE *Fa t* PRELUDE [134 157] 4 b
49 DARWIN *Orig n of Sp cies* 41c d 87a c 233c d
50 MARX *Cap tal* 16d 17a 85a 88d
53 JAMES *P y h logy* 187b
54 FREUD *Orig n and Devel pment f Psycho-Analy* 2a / *Ci l ation and It D contents* 778b 779d / *New Introductory Lectures* 8 7a b

224 -d / *King Lear* 244a 283a c esp ACT I SC I [211 26] 246d SC IV [83 311] 252d 253b ACT IV SC II [9–68] 270d 271b / *Macbeth* ACT II SC IV 294a c / *Pe icles* ACT I PROLOGUE [ ]–S I [142] 421b-423b

28 HARVEY *Ci culation of the Blo d* 305a d

30 B ON *Ad nceme t of Learning* 33b d / *Novum Organum* BK II APH 29 159b c

35 LOCKE *Huma U dersta d g* BK III CH III SECT 17 258d 259b H V S T 22 27 273d 276a BK IV CH IV SECT 13 16 326d 328d

36 SWIFT *Gull ver* PART IV 155b 157a

38 MONTESQUIEU *Spirit of Laws* BK XII 87d 88

38 ROUSS AU *In quality* 363a 366d

41 G B ON *Decl ne and Fall* 93d 94a

46 HEGEL *Ph l sophy of History* INTRO 183c d

49 DARWIN *O g n of Spec s* 24a c

51 T LSTOY *W a d Peace* BK XI 525c

53 JAM S *Psychology* 241b 258b

54 FREUD *U co ci us* 433c / *General I t oduc t* 530d 570 572d / *New Introductory Lectures* 830d 831a

2f The order of n ture and the order of free dom the phenomenal and the noume n l worlds th ant thes s of nature and spir t

12 LUC ETIUS *Nature of Th ngs* K I [251 293] 18b-d

31 S I OZA *Eth s* ART I PROP 26–29 365b 366c PROP 3 33 367a 369 PROP 36 369b APPENDIX 369b 372d P III ART I I 395a d ART IV PRO 57 HO 441a c

42 KANT *Pu Re* 93c 99a 101b 107b 133 c 164a 170d esp 164a 165 169 170a / *F nd P in M t phys c of Mor ls* 253a c 271 c 275b 281c 282d 283d 287d / *P c tical Re* 292a 293b 296a d 301d 302d 307d 314d 327d 329 331c 337a c / *I tro M t physic of Mor l* 383c d 386b 387a 388 d 390b / *J idgement* 463 -467a esp 465a c 570b 572b esp 571 572a 587a 588 603 b 607c 609b 610

46 HE EL *Ph l ophy f Right* REF 6a 7a RT I par 39 21d PART III p 187 65a c pa 280 94d 95a p 352 112b ADDITION I 115 d 152 141 d 64 144 145a 167 145c / *Phil ophy f History* NTRO 164b c 170c 172b 178a 179c 186b c 203b 206a c ART I 207 209a 222a 224a 236 c 245d 246 247 d 252a 255a 257 d P RT 268b 271

51 TOLSTOY *W r d Peace* E ILO U II 689 690a 693d 694d

3 The ord r of n ture

3 The r t onal ty of natur the maxims and l ws of nature

7 PL TO *M o* 180a / *Ph do* 240d 242b / *T m e* 447b 455d p 455a d / *S phist* 567a 569a / *Philebu* 618b 619d

8 ARISTOTLE *Physics* BK I CH 4 [188 5 12] 263b BK II CH 8 [199 8–^{b}33] 276b 277a / *He vens* BK I CH 4 [271 34] 362c / *Generat on a d Corruption* BK II CH 10 [336^{b}25–34] 438d / *M taphy s* BK I CH 3 [984^{b}8 22] 502d BK II CH – [994^{b}8 10] 512d 513a / *Prophesying* CH 2 [463^{b}11 15] 708a

9 A TOTLE *P rts of A mals* BK I CH I [639^b 12–640 12] 161d 162b K III CH 4 [665^{b}19–] 193c BK IV CH 6 [683 0–25] 214b / *Gait of Animals* CH 2 [704^{b}12 18] 243c C I [711 15 20] 249b / *Generat on of Animals* BK I CH I [715^{a}25–^{b}17] 255b d CH 4 [717 13 18] 257a BK II C 4 [739^{b}19–21] 280c C 5 [741^{b}2–4] 282c CH 6 [744 36–745^{b}1] 285c 286d / *Pol t s* BK I CH 8 [1256^{b}8–26] 450b c

10 G EN *Natural Facult es* K I C I 6 170b c CH 2 172d 173c sp 173c C I 13 175c BK II CH 4 187c

12 LU R TIUS *Natur of Thi gs* BK I [146–264] 2d-4b BK II [294 3 7] 18d 19a [77 I 89] 28d K V [306–310] 65a

12 AURELIUS *Med tat ons* BK II SECT 4 257b BK IV SECT 40 267a b S T 45 46 267b-c BK V SECT 30 273 K V SECT I 274a SECT 36 277 S T 40 277d K VI ECT 25 281c SECT 75 285c BK X SE T 6–7 297a

16 COPERNICUS *Revoluti of the H venly Spheres* BK I 526a 529a

16 KE LER *Harmoni s f th World* 1023b 1080b

17 PLOTINUS *Th d E nead* TR VIII 129a 136 P CH 2 4 129b 131a / *Fourth E i ead* TR IV CH 3 164d 165b

18 AUGUST N *Christian Doct in* BK II CH 32 652b c

19 AQU N *Summa The l gica* PART I Q A 3 ANS and R 2 12c 14a Q 19 A 4 AN 111c 112c Q 71 A I 4 367a 368b Q 76 A 5 AN 394c 396a PART I I Q I A 2 610b 611b Q 5 A 5 R P 640b 641a

20 AQU N *Summa Theol g* PART III Q 9 A 4 AN 766b 767b

21 DANT *D i e C medy* PARAD SE VIII [91 148] 117d 118

23 HO *Le tl n* A T I 56d

24 RA LA S *G g ntu and Pa tagruel* BK III 192b

25 MON N *E ays* 80b 81b 216c 219a esp 218 219 516b c

28 G LB R *Lo d t* BK I 12 b BK V 110d

28 GAL EO *Two N w S ience* F T DAY 131d 132 135b 136b THIRD DAY 200a d

28 H RV Y *Mot n f tl H t* 285 302 304a c / *O A mal Generat o* 390b 402 426b-429b 447b d 453 454b 489d

29 CERV NTE *Do Qu x te* PART XIa

30 BA ON *Advancement of Learn g* 92 d / *No um Org m* K I A H IO 13 107d AP 24 108 K APH 6 139b H 43 175

31 DE CART S *D scour* PART V 54 55 56 esp 55b 59a / *Obj ct o a d Replie* 214d 215b

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31 SPINOZA *Ethics* PART I PROP 29 SCHOL 366b c PROP 33 SCHOL 1-2 367c 369a APPENDIX 369b 372d PART III 395a d PART IV PREF 422b d 424a

33 PASCAL *Pensées* 7 184b 75 185b 186a / *Vacuum* 359a 365b / *G eat Experiment* 382a 389b esp 388b 389a / *Weight of Air* 405b 415b 425a 429a

34 NEWTON *Principles* BK III RULE I-III 270a 271a esp RULE I 270a / *Optics* BK I 409b BK III 528b 529a 540a 542a 543a

35 LOCKE *Human Understanding* BK IV CH III SECT 28- 9 322a 323a

35 B RK LEY *Human Knowledge* SECT 29 33 418c 419a passim SECT 6 -66 425a-426a SECT 103-109 433a 434b passim SECT 50-151 442d 443c

35 HUME *H man Understanding* SECT V DIV 44 468d-469c SECT VI DIV 47 470b d ECT VIII DIV 64 70 478d-482c passim

38 ROUSSEAU *Social Cont act* BK II 397a

42 KANT *Pure Reason* 127a 128a 220a b / *Fu d Pri M taphysic of Morals* 256d 257a 264d 265a / *Judgement* 467d-468c 550b 551a c 558b c 559c d 583d 584c

45 LAVOISIER *Elem nts of Chem st y* PART I 41b-c

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45 FARADAY *R sea ches in Electricity* 582b 584a pass m 839b-c

46 HEGEL *Philosophy of R ght* PREF 6a 7a PA T III par 46 55c d ADDITIONS I 115a d / *Pl ilosophy of History* INTRO 156d 160b 183 d 186d P RT IV 361a c

47 GOETHE *Faust* PART I [447 453] 13a

48 MELVILLE *Moby Dick* 231a

49 DARWIN *Origin of Sp cies* 71a c 91b 92d esp 92c d 97a 98a c 243c d

51 TOLSTOY *W a d Peace* BK XI 469a 470c BK XIII 563a b EPILOGU II 687d 688a 693d 696d

53 JAMES *Ps hology* 5a 503b 672a 862 866a 870b 873a b 882 886b esp 884b 885a 889a 890a

3b Cont nuity and h erarchy in the order of nature

7 PLATO *Timaeus* 447b-458a / *Ph lebus* 618b-619d

8 ARISTOTLE *Categories* CH 13 20b d / *Top c* BK VI CH 10 [148 23 38] 202b-c *Physics* BK VIII CH I [250b11 14] 334a / *He vens* BK I CH 2 359d 360d BK II CH 12 383b 384c / *Gener t on and Corrupt on* BK I CH 10 [336b 25 34] 438d / *Metaph ic* K I CH 6 505b-506b CH 7 [988 34 b5] 506c CH 9 508c 511c BK XIV CH 3 [1090b14 21] 623b / *Soul* BK I CH 5 [411a7 23] 641a b BK II CH 2 [413 20-b4] 643b c BK III CH II [433b31 434a9] 666d / *Sleep* CH I 696a 697c

9 ARISTOTLE *History of Animals* BK VIII CH I 114b d 115b / *Parts of An mals* BK I CH 5 [644b23-645 26] 168c 169a BK IV CH 5 [681 12 15] 211d CH 10 [686b23 35] 218b-c / *Generation of Animals* BK II CH I [731b24 733b17] 272a 274a

12 LUCRETIUS *Nature of Thi gs* BK I [418 448] 6b c K II [865-930] 26a d BK V [783-836] 71b 72a

12 EPICTETUS *Discourses* BK II CH 8 146a b

12 AURELIUS *Med tat ons* BK V SECT 8 269d 270b SECT 16 271c d BK IX SECT 9 292b d BK XI SECT 18 304b c

17 PLOTINUS *Second Ennead* TR III CH 13 46c 47b / *Th rd Ennead* TR III CH 3 9 d 94c

18 AUGUSTINE *Confessions* BK VII par 16-23 48c 50c / *C ty of God* BK XI CH 22 333d 334c BK XII CH 2-5 343c 345b K XIX CH 12 17 518c 523a

19 AQUINAS *Summa Theolog ca* PART I Q 18 A 3 106b 107c Q 23 A 5 REP 3 135d 137d Q 47 A 2 257b 258c Q 48 A 2 ANS and REP 3 260c 261b Q 50 A I ANS a d REP I 269b-270a A 4 273b 274b Q 57 A I ANS 295a d Q 71 A I REP 4 367a 368b Q 75 A 7 384d 385c Q 76 A 3 ANS 391a 393a A 5 REP 3 4 394c 396a Q 77 A 2 401a d A 4 REP I 403a d Q 108 552c 562a esp A 4 555b d Q 110 A 3 ANS 566d 567b PART I II Q I A 4 REP I 612a 613a Q 5 A I REP 3 636d 637c

20 AQUINAS *Summa Theologica* PART I I Q 7 A 9 ANS 751d 752c

21 DANTE *D ne Comedy* PARADISE I [94 142] 107b d XIII [52-87] 126a b

25 MONTAIGNE *Essays* 218 219a

27 SH K SP ARE *Troilus and Cressida* ACT I SC III [75 139] 108d 109c

28 HARV Y *Mot on of the Heart* 277b-278d esp 278b c / *On Animal Generat on* 336b-d 400d-401a

30 B CON *Novum O ganum* BK II APH 30 159 d A I 35 162a 164a APH 37 168d 169c A H 41 173d 174b

32 MILTON *Pa adi e Lost* BK V [469-505] 185b-186a

33 PASCAL *Pensées* 119-121 195a

35 LOCKE *Huma U derst nding* BK II CH IX SECT 12 140c BK III CH VI SECT II 12 271b-272b K IV C I XVI SECT 12 370c 371a

42 KANT *Pu e Reaso* 193 200c esp 199c 200c / *Judgement* 578d 580a esp 579b-c 582b-c

43 FEDERAL ST NU I ER 37 119b-d

46 H GEL *Phil sophy of H st ry* INTRO 183c-d

49 DARWIN *Or gin f Species* 55b-62 63d 64d 179b-180d 228c 229a c 238b-243d esp 241b-c, 243b d / *Descent of Man* 340d 341d

53 J MES *Psychology* 51a 52 95b-98a 686b

54 FREUD *Bey nd the Pleasure P cipie* 651d 654b esp 652b c 653b 654a

3c Nature and causality

7 PLATO *Timaeus* 455a-b / *Phaedrus* 615c 619d e p 618b-c / *Laws* BK X 764a 765a
8 ARISTOTLE *Physics* BK II 268b d 278a c BK VIII CH 1 334a 336b esp [252 5 ^{b}7] 335d 336b / *Generation and Corruption* BK I CH 3 413c-416c BK II CH 9-10 436d 439c / *Soul* BK II CH 4 [415^{b}8 416 18] 645d 646c
9 ARISTOTLE *Parts of Animals* BK I CH 1 [639^b 11-642^{b}4] 161d 165d esp [642 1-^{b}4] 165a d
12 AURELIUS *Meditations* BK VI SECT 10 274b-c BK VII SECT 19 281a SECT 25 281c SECT 75 285c
17 PLOTINUS *Third Ennead* TR I CH 1 78a c / *Fourth Ennead* TR IV CH 32 39 175c 180a
19 AQUINAS *Summa Theologica* PART I Q 2 A 3 ANS and REP 2 12c 14a Q 18 A 3 ANS 106b-107c PART I II Q 12 A 5 ANS 672a c
21 DANTE *Divine Comedy* PARADISE VIII [94 148] 118a c XIII [52-87] 126a b
23 HOBBES *Leviathan* PART II 113b
25 MONTAIGNE *Essays* 80b 81b
30 BACON *Advancement of Learning* 43d-46a / *Novum Organum* BK II APH 3-5 137c 139a APH 17 149b d APH 27 157b 158d
31 DESCARTES *Meditations* III 90a b / *Objections and Replies* 214d 215b
31 SPINOZA *Ethics* PART I PROP 29 366b-c PROP 33 367b 369a PROP 36 369b APPENDIX 369b 372d PART II PROP 7 375a c PART III 395a-d PART IV PREF 422b d-424a PROP 57 SCHOL 441a-c
33 PASCAL *Pensées* 119-121 195a
34 NEWTON *Principles* BK III RULE I II 270a
35 HUME *Human Understanding* SECT VI DIV 47 470b-d SECT VIII DIV 67 480c-481a
36 STERNE *Tristram Shandy* 502b-503a
38 MONTESQUIEU *Spirit of Laws* BK I 1a b
38 ROUSSEAU *Social Contract* BK II 397a
42 KANT *Pure Reason* 140b d 143a 187c 189a / *Practical Reason* 339a / *Judgement* 467a-470c 557c 558b 562d 564c 568c-d 581a 582c
45 FARADAY *Researches in Electricity* 582b 584a passim
49 DARWIN *Descent of Man* 284c 285 esp 285b-c
51 TOLSTOY *War and Peace* BK IX 344a b BK X 469a 470c BK XI 563a b EPILOGUE I 646c 647b 650b c EPILOGUE II 678b c 679b c 687d 688a 691d 693b 694d 696d
53 JAMES *Psychology* 824a 825a 856b-858a

3c(1) The distinction between the regular and the chance event the uniformity of nature

7 PLATO *Timaeus* 455a b
8 ARISTOTLE *Prior Analytics* BK I CH 13 [32^b 4 23] 48b-d / *Posterior Analytics* BK I CH 4 [73^{b}10-16] 100c d CH 30 119d BK II CH 12 [94^{b}39-95^{a}9] 129c d / *Physics* BK I CH 4-6 272c 275a BK II CH 8 [198^{b}16-199 8] 275d 276b [199 33-^{b}6] 276c 277a / *Heavens* BK II CH 8 [289^{b}22 28] 381b / *Generation and Corruption* BK II CH 6 [333 35 ^{b}20] 434b c / *Metaphysics* BK V CH 30 [10 5 13-29] 547a-c BK VI CH 2 [1026^{b}27 10 7^{a}18] 549a b CH 3 549c d BK XI CH 8 593a d
9 ARISTOTLE *Parts of Animals* BK I CH 1 [640 18-33] 162c d [641^{b}13-31] 164c d / *Generation of Animals* BK IV CH 4 [770^{b}10-24] 312b c / *Rhetoric* BK I CH 10 [1369 31 ^{b}5] 612c-d
12 LUCRETIUS *Nature of Things* BK II [51 293] 18b-d
12 AURELIUS *Meditations* BK VI SECT 46 278c d BK VII SECT 1 279b SECT 49 282d BK IX SECT 9 292b d SECT 28 293d 294a BK X SECT 27 299d BK XI SECT 27 306b
17 PLOTINUS *Fourth Ennead* TR IV CH 32 39 175c 180a
19 AQUINAS *Summa Theologica* PART I Q 2 A 3 ANS 12c 14a Q 22 A 2 REP 1 128d 130d Q 57 A 3 ANS 297b 298a Q 103 A 1 ANS 528b-529a A 5 REP 1 531b 532b A 7 REP 2 533b d Q 116 A 1 592d 593d A 3 594c 595a
20 AQUINAS *Summa Theologica* PART I II Q 84 A 1 REP 3 174b 175a
28 HARVEY *On Animal Generation* 412c 413a
30 BACON *Novum Organum* BK II APH 33 161b-d APH 36-37 164a 169c
31 SPINOZA *Ethics* PART I PROP 29 366b c APPENDIX 369b 372d PART III 395a d PART IV PREF 422b d-424a
34 NEWTON *Principles* BK III RULE I II 270a
35 LOCKE *Human Understanding* BK III CH VI SECT 36-37 279a b BK IV CH III SECT 28 29 322a 323a passim
35 BERKELEY *Human Knowledge* SECT 29-33 418c 419a passim SECT 57 423d-424a SECT 60-66 424b 426a passim SECT 103 109 433a-434b passim SECT 146 442a b SECT 150-151 442d-443c
35 HUME *Human Understanding* SECT VI DIV 47 470b d SECT VIII DIV 64 70 478d-482c passim esp DIV 67 480c 481a SECT X DIV 90 491a b
42 KANT *Fund Prin Metaphysic of Morals* 254d 265a / *Judgement* 558b c 566a b
46 HEGEL *Philosophy of History* INTRO 183c d
47 GOETHE *Faust* PART II [6 98 233] 248b 249b
49 DARWIN *Origin of Species* 65a / *Descent of Man* 593d
51 TOLSTOY *War and Peace* EPILOGUE I 646c 647b
53 JAMES *Psychology* 864a
54 FREUD *General Introduction* 454b-c

3c(2) The determinations of nature distinguished from the voluntary or free

7 PLATO *Phaedo* 240d 242b
8 ARISTOTLE *Physics* BK VI CH [251 8 ^{b}] 334d 335a / *Metaphysics* BK IX CH 2 571c 572a CH 5 573a c CH 7 [1 48^{b}35 49 8] 574 d

(3c *Nature and causal ty* 3c(2) *The d t rm na- t ons of natu e d st ngu h d from the volun- tary or fr e*)

9 Aristotle *Rl to ic* bk i ch 10 [1368^b28–1369^b27] 612a 613a

12 Lucretius *Natı e of Things* bk ii [251 293] 18b d

19 Aquinas *Su mma Th log ca* part i q 2 a 3 rep 2 12c 14a q 6 a 1 rep 2 28b d q 18 a 3 ans 106b 10 c q 19 a 3 rep 3 110b 111c a 4 111c 112c q 22 a 2 rep 4 128d 130d q 41 a 2 ans 218c 219d a 6 ans 223b 224a q 46 a 1 rep 9 o 250a 252d q 47 1 rep 1 256a 257b q 59 a 1 ans 306c 307b q o a 3 ans and rep 4 5 365b 367a q 79 a 1 rep 3 407b 409a q 83 a 1 rep 3 436d 438a q 103 a 1 rep 1 3 528b 529a q 105 a 1 rep 2 538d 539 part i ii q 1 a 2 610b 611b a 3 ans and rep 3 611b 612a a 5 ans 613a 614a q 6 a 1 644d 646a q 8 a 1 ans 655b 656a q 9 a 4 rep 1 660a d q o a 1 662d 663d q 11 2 ans 667b d q 12 a 5 ans 672a c q 13 a 6 676c 677b q 17 a 8–9 692a 693d q 21 a 1 ans and rep 1 2 717a d

20 Aquinas *Summa Theolog ca* part i–ii q 49 a 4 ans and rep 2 5a 6a q 50 a 1 ans and rep 1 6a 7b a 2 an 7c 8a a 3 8b 9a a 5 rep 1 3 10b d q 51 a 1 12b 13c q 55 a 1 ans and re 5 26b 27a q 72 a 3 ans and rep 1 2 113b 114a

21 Dante *D vre C m dy* urg tory x ii [82] xv [75] 79b 80c p radise 1 [94 142] 107b d xxvi [24 138] 147a b

23 Hobbes *Levi than* part i 61a b

25 Montaigne *E ts* 218 219a

28 Harvey *On An mal Generat on* 456c 458a passim

31 Descarte *D cou* p rt v 60b

31 S inoza *Eth c* rt i ap endix 369b–372d p rt iii 395a d art iv pro 57 schol 441a c

35 Hu e *Human Under tand ng* se t viii div 64 72 478d-483c passim

38 Rous eau *In qual ty* 337d 338a

42 Kant *Pı Rea n* 140b d 143a 164a 171a esp 164a 165c / *F nd I n M taphy f Mo als* 264d 265a 275b 276a 277a 279b d 287d esp 282b 283d 285c 286a / *P a c al Rea on* 295a d 319c 321b 331c 337a c / *Intro M taphy f M al* 386d 387a c / *Judgem nt* 63a-46 a 571c 572a

46 H gel *Pl ophy f Right* part iii par 194 66c d d tion i 115a d 152 141 d / *Ph hy f H t* i intro 171b-c 178a 179c 18 b c p r 207b c 236a c 24 c d

49 D rwin *D scent of M n* 288b

51 Tolstoy *W a and P* epilogue ii 688a 694d

53 James *Psychol gy* 84a 94b esp 90b 93a 291a 295b esp 291a b 387b 388a 704b 706b esp 706b 820b 825a

54 Freud *Orıg n and Dev lopment f Psycho-Analysis* 13c / *G neral Introduction* 453b-467b esp 454b c 462d 486c 488c esp 486d

3c(3) Teleology in nature the operation of f nal causes

7 Plato *Pha do* 241b 242b / *T maeus* 447d 448a 455a b 465d-466a

8 Aristotle *Posterio Analyt c* bk ii ch 11 [94^b26–95 9] 129c d / *Physics* bk i ch 9 [192 16–24] 268b c bk ii ch 1 [193^b 1 19] 269d 270a c 1 2 [194 2, ^{b}13] 270d 271a ch 8–9 275d 278a c / *H av ns* bk ii ch 12 383b-384c / *G neration and Corruption* bk ii ch 6 [333 35 ^{b}20] 434b c / *Meteo ology* bk i ch 12 493d 494d / *M aphysı s* bk i ch 2 [982^b4 11] 500d ch 7 [988^b6–15] 506c-d c 19 [992 29–34] 510c bk ii ch 2 [994^b8 16] 512d 513a bk iii ch 2 [996 22 36] 514d 515a bk v ch 4 [1014^b34 1015 10] 535b bk xii ch 7 [1072^b1 4] 602c ch 10 [1075 12 ^{b}16] 605d 606c / *Soul* bk ii ch 4 [415^b13 22] 645d 646a ch 8 [420^b16– 3] 652a bk iii ch 9 [432^b21 26] 665b c ch 12 13 667a 668d passim / *Sle p* c 1 2 [455^b13 28] 698b-c / *P phe y ng* c1 2 [463^b 1 15] 708a

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4a Nature or essence as an object of defin tion

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46 Hegel *Philosophy of History* intro 156b 164d 178a 179b 190b 201a c part i 246b c
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7 Plato *Symposium* 155d 157a / *Go gias* 282b 284b / *R publ* bk i 309b 310b bk iv 350a 355c bk viii 410a c bk ix 421a 425b bk x 439b 441a c / *T m eu* 474b 476b / *Sophist* 557b d / *Ph l bu* 619d 620b
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12 Epictetus *D our* bk i c 6 110c 112b ch 11 116d 118d ch 15 121c d bk iii ch 3 175a 180a ch 10 185d 187a bk iv c 6-7 230b-235a
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20 Aquinas *S mma Theolog a* part i ii q 49 a 2 ans and rep 1 2b-4a q 51 a 1 ans 12b-13c q 54 a 3 24c 25b q 63 a 1 63a 64a q 71 a 2 106d 107c q 85 178b 184a q 91 a 2 208d 209d q 94 220d 226b part ii ii q 182 a 1 ans 620b 621d q 183 a 1 625a 626a
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46 Hegel *Ph l sophy of H to y* int o 196d 197a
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6 The personification and worship of nature

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6 HERODOTUS *History* BK I 31a b 48c

7 PLATO *Phaedrus* 116b d

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12 LUCRETIUS *Nature of Things* BK I [43] 1a d BK II [581-66] 22b 23b BK V [783 836] 71b 72a

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27 SHAKESPEARE *King Lear* ACT I SC II [1 22] 247d 248a SC IV [297 311] 253a b ACT III SC II [1 25] 262d 263a

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40 GIBBON *Decline and Fall* 81d 93b c

42 KANT *Judgement* 504b 505a

46 HEGEL *Philosophy of History* INTRO 196d 197c PART I 220c 221a 278a c 244c 245a 252a 255a PART II 263d 265c 268b 271c PART III 291d 292a

47 GOETHE *Faust* PART I [430-521] 12b 15a [1064 1121] 26b 28a [3217 3 39] 79a b PART II [4679-4 27] 116b 117b

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19 AQUINAS *Summa Theologica* PART I Q 1 A 8 REP 2 7c 8d Q 2 A 2 REP 1 11d 12c Q 8 A 3 ANS and REP 4 36b 37c Q 1 A 2 ANS and REP 1 51c 52c AA 12 13 60d 62b Q 6 31 325b QQ 94 101 501c 523d PART I II Q 4 A 5 REP 1 632c 634b

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Terms or discussions relevant to the conception of nature as the totality of things or as the whole of sensible reality *see* EXPERIENCE 1 GOD 11 ONE AND MANY 1b WORLD 3-3b

Other considerations of the distinction between nature and art *see* ART 2a-2c 9a and for the distinction between the natural and the conventional in language law and justice *see* CUSTOM AND CONVENTION 1 JUSTICE 6b 10 LANGUAGE 2a 2b LAW 2 4f SIGN AND SYMBOL 1a-1f SLAVERY 2 3

For The distinction between the state of nature and the state of civil society and for the problem of the naturalness of the family and the state *see* FAMILY 1 LAW 4b LIBERTY 1b NECE ITY AND CONTI GENCY 5b–5d STATE 1–1a 3b–3c WAR AND PEACE 1

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Other treatments of natural and violent motion *see* CHANGE 7b MECHANICS 5e(2)–5f

The distinction between the natural the voluntary and the free *see* CAUSE 3 LIBERTY 4b WILL 3a(1)–3a(2) 6c

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Discussions bearing on the rationality or order of nature *see* MIND 10a RELATION 5b WORLD 6c and for the special problem of continuity or hierarchy in the order of nature *see* ANIMAL 1b–1c EVOLUTION 4a 4c LIFE AND DEATH 2 3a MAN 1a 1c WORLD 6b

The reign of causality and the uniformity of nature *see* CHANCE 2a FATE 5 NECESSITY AND CONTINGENCY 3c WILL 5c and for the problem of final causes in nature *see* CAUSE 6

Other considerations of divine causality in relation to the order of nature *see* CAUSE 7b–7d GOD 7e

Nature in relation to the various sciences *see* METAPHYSICS 2a 3b PHILOSOPHY 2a–2b PHYSICS 1–1b SCIENCE 3a TRUTH 2c

The nature of man as a standard in ethics economics and politics *see* CITIZEN 8 DEMOCRACY 4b DESIRE 3a GOOD AND EVIL 3a NECESSITY AND CONTINGENCY 5e SLAVERY 2d 3d STATE 3b(1) WEALTH 10b

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ADDITIONAL READINGS

Listed b low are wo ks n t i cluded in *G e t Book of the W estern W o ld* but relevant to the idea and top cs with wh ch this chapter deals These works are divided into two groups

I W ks by authors represented in this collection

II Works by authors not repre ented in this collection

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Chapter 61 NECESSITY AND CONTINGENCY

INTRODUCTION

THE basic meaning of the words *necessity* and *contingency* is made known to us by the fact that we can substitute for them the familiar words *must* and *may* Is there any being which *must* exist? asks the same question as Does anything exist of *necessity*? Are all things of the sort which *may* or *may not* exist or are they divided into those which *must* exist and those which *may* or *may not* exist? means the same as Is everything *contingent* in being or do some things exist *necessarily* and some *contingently*?

The great issues which involve the opposition between necessity and contingency are concerned with more than questions about being or existence They also deal with cause and effect judgment and reasoning happenings or events the actions and decisions of men human history and social institutions In each case the problem is formulated by such questions as Does everything which happens in nature or history happen necessarily? Is every thing contingent? Or are some events necessary and others contingent? Is the relation between cause and effect a necessary connection or do some causes produce their effects contingently?

Are there some propositions which the mind *must* affirm because their truth is necessary? Or are all propositions such that they *may* or *may not* be true our affirmation or denial of them being contingent upon factors which lie outside the propositions themselves? In reasoning does the conclusion always follow by necessity from the premises if it follows at all? And are all conclusions which follow necessarily from their premises necessarily true or may some be necessary truths and some contingent?

Are men necessitated in all their acts or are certain actions contingent upon the exercise of their will and in this sense free? Does human liberty consist merely in the freedom of a man s action from the external necessity of coercion or constraint or does it consist in a man s being able to choose whatever he chooses freely rather than necessarily? Is every act of the will necessarily determined or are some acts of the will acts of free choice?

Are certain human institutions such as the family and the state necessary? Are men compelled to live socially or can they choose the solitary life? If domestic and political society are necessary are the ways in which they are organized also necessary or are such things as monogamy in the family and monarchy in the state contingent? Are such things as war slavery poverty and crime necessary features of human society or are they the result of circumstances which are contingent and which can therefore be remedied?

These questions indicate the range of subject matters in which issues are raised concerning the necessary and the contingent They also indicate that the other ideas to which necessity and contingency have relevance are too manifold to permit an enumeration of all the other chapters in which some aspect of necessity and contingency is discussed This chapter stands to the others as a kind of summary of the theme of necessity and contingency It assembles in one place the various topics problems or subject matters which traditionally engage the human mind with that theme

Two chapters alone demand specific mention as in a sense being concerned with ideas that seem to be inseparable from the notions of necessity and contingency They are FATE and CHANCE Though they stand opposed to one another as the necessary to the contingent they do not cover every application of this opposition They are largely concerned with necessity and contingency in the realm of change in the causation of the events of na

ture or the happenings of history They do not deal at least not directly with necessity and contingency in being or existence in thought or knowledge in human acts and social institutions

THE NECESSARY AND the contingent do not seem to be opposed in exactly the sam way in each of the four areas—namely being change thought and action—in which they raise basic issues

In the sphere of human action for example writers like Hobbes Locke and Hume substitute the notion of liberty for contingency as the opposite of necessity The meaning of necessity alters in consequence Liberty according to these authors implies the absence not of all necessity but only of external necessity in the form of compulsion An internal necessity they think is quite compatible with complete freedom

Hume therefore dismisses the supposed conflict between liberty and necessity as groundless By liberty he writes we can only mean *a power of acting or not acting according to the determinations of the will* that is if we choose to remain at rest we may if we choose to move we also may Now this hypothetical liberty is universally allowed to belong to every one who is not a prisoner and in chains Liberty when opposed to necessity not to constraint is the same thing with chance which is universally allowed to have no existence

Similarly Locke defines liberty as a man s power to do or forbear doing any particular action according as its doing or forbearance has the actual preference in the mind which is the same thing as to say according as he himself wills it Liberty in this sense he adds belongs not to the will the acts of which are necessitated by their causes but to the man who is under no external necessity in the form of compulsion to do what is contrary to his will or to refrain from doing what he wills

Hobbes seems to go even further along the same line of thought Holding that liberty is destroyed only by external impediments to action he uses necessity in a sense which makes it consistent with liberty or inseparable from it The actions which men voluntarily do he says because they proceed from their will proceed from *liberty* and yet because every act of man s will and every desire and inclination proceeds from some cause and that from another cause in a continual chain (whose first link is in the hand of God the first of all causes) they proceed from *necessity*

Yet if what Hobbes means by external impediments represents the same nullification of liberty which others call compulsion" or restraint then there is at least one meaning of necessity which stands opposed to liberty Enumerating the meanings of necessary Aristotle lists as one sense the compulsory or compulsion *i e* that which impedes or tends to hinder that which is contrary to impulse or purpose or to the movement which accords with purpose and with reasoning It is in a related sense that Plato opposes necessity to intelligence Necessity represents for him those resistant factors in nature which the mind of man or God must overcome or persuade to give way if reason or purpose is to prevail in the coming to be of anything In this sense necessity like chance is opposed to purpose Blind necessity and blind chance both exclude the operation of final causes both exclude the possibility that the events of nature are directed toward an end

WE SEEM TO HAVE found almost universal agreement on the point that there is one sense in which necessity conflicts with liberty But this agreement does not affect the issue whether liberty is more than freedom from external coercion There are those like Aquinas who think that man s will is free in its acts of choice with regard to particular contingent means. Aquinas agrees that what is called necessity of coercion is altogether repugnant to the will" The same act cannot be absolutely coerced and voluntary But the question is whether the will s acts are necessarily determined by causes operating within the sphere of the will itself

Aquinas names two modes of necessity which operate *within* the sphere of the will and restrict its freedom. One is the natural necessity that the will should desire an ultimate end such as the complete good or happiness If a man wills any object at all as the ultimate goal of his life he cannot will anything other or less than that which can satisfy all his natural desires The

other necessity is that which concerns the use of those means which are absolutely indispensable conditions for reaching the end being sought This may be an absolute or a conditional necessity When the end is itself necessary (*e g* happiness) whatever means are necessary thereto necessitate the will absolutely When a certain end is not necessary but has been freely adopted (*e g* a certain destination) and when *only one* means is available (*e g* one mode of transportation) then it becomes necessary to choose that means But this necessity is conditional since it remains in force only on the condition that we continue to have a certain end in view—an end we can relinquish at any time as freely as we adopted it

According to Aquinas this leaves a great many acts of the will *which are in no way necessitated* those in which there is no necessary connection between the means and a given end and those in which a given means is necessary *only on the condition that a certain end is sought* If the end need not be sought then the will is free not to choose the means of achieving it and if when the end is necessarily sought alternative means are available then the will is free to choose one rather than another

According to this theory liberty consists in the absence of internal as well as external necessity Furthermore liberty seems to be related positively to contingency insofar as freedom of choice depends on a contingent connection between means and ends or upon the contingent *i e* the conditional character of the end On the other hand those who hold that the will is never free from internal necessity insist that the act of choice even with respect to contingent means is always caused If being caused is equivalent to being determined—which seems to be the view of Hobbes Locke and Hume—then whether or not we know what causes a particular choice our wills are so determined that we could not have chosen otherwise

THE PROBLEM OF the freedom of the will in relation to the causes which determine its acts is considered in the chapter on WILL The foregoing discussion suffices here for the purpose of throwing light on the meaning of necessity If now we shift from human action to the realm of becoming change or motion we face the question of the relation between necessity and causation in its most general form

In the realm of nature the alternatives to necessity are referred to as chance and as contingency The significance of these alternatives depends on the theory of causation According to one opinion every effect is necessarily determined by its causes and every cause necessarily produces certain effects Given the causal chain of past events leading up to the present every future event is necessarily determined Nothing that ever happens could happen otherwise Nothing happens contingently or by chance This theory of causation is accordingly a doctrine of universal necessity or absolute determinism in the realm of change

In nature writes Spinoza there is nothing contingent but all things are determined from the necessity of the divine nature to exist *and act in a certain manner* *Though nothing* which exists or happens is contingent God alone exists from the necessity of His own nature and acts alone from the necessity of His own nature The divine necessity is therefore different from the necessity of everything else which follows from the divine nature One is the necessity of freedom or self-determination the other the necessity of compulsion or determination by another That thing is called free says Spinoza which exists from the necessity of its own nature alone and is determined to action by itself alone That thing on the other hand is called necessary or rather compelled which by another is determined to existence and action in a fixed and prescribed manner

Hume s statement that there is no such thing as *Chance* in the world would appear to agree with Spinoza s denial of contingency But Hume also seems to deny the perception of any necessary connection between cause and effect This is not to say that events happen without cause but only that our ignorance of the real cause of any event has the same influence on the understanding as if nothing were necessarily determined by its causes

We are never able Hume thinks to discover any power or necessary connexion any quality which binds the effect to the cause

and renders the one an infallible consequence of the other One event follows another but we never can observe any tie between them They seem *conjoined* but never *connected*

Our idea therefore of necessity and causation arises entirely from the uniformity observable in the operations of nature where similar objects are constantly conjoined together and the mind is determined by custom to infer the one from the appearance of the other These two circumstances form the whole of that necessity which we ascribe to matter Beyond the constant *conjunction* of similar objects and the consequent *inference* from one to the other we have no notion of any necessity or connexion

But the question remains whether in the order of nature itself particular events are necessarily determined or happen contingently The fact that we may be ignorant of real necessities does not as Hume seems to admit imply their non existence Our saying it is only probable that the sun will rise tomorrow may reflect our inadequate knowledge of causes rather than a real indeterminacy in the order of nature On the other hand to say as Hume does that chance has no place in nature may mean only that nothing exists without a cause of its existence rather than that whatever happens is necessarily determined by its causes

As INDICATED IN the chapter on CHANCE two things must be distinguished here the absolutely uncaused—the spontaneous or fortuitous—and the contingently caused or that which depends upon the coincidence of a number of independent causes A given condition may be necessary to produce a certain result as for example oxygen may be necessary for combustion But by itself it may not be sufficient for the production of that effect If the maxim nothing exists without a cause of its existence requires a cause or causes adequate to produce the effect then the maxim is equivalent to the principle of sufficient reason When ever two or more causes each of which may be necessary are not sufficient in separation the existence of the effect depends upon their combination and the effect is contingent if the required combination of causes is itself not necessarily caused

The issue concerning contingency in nature thus seems to be more sharply stated when there is no reference to our knowledge or ignorance of causes On this issue Aristotle and Spinoza appear to be more clearly opposed to one another than Hume is to either

If things do not take place of necessity an event according to Aristotle might just as easily not happen as happen for the meaning of the word fortuitous with regard to present or future events is that reality is so constituted that it may issue in either of two opposite directions For example a sea fight must either take place tomorrow or not but it is not necessary that it should take place tomorrow neither is it necessary that it should not take place yet it is necessary that it either should or should not take place tomorrow Though Aristotle holds that one of the two propositions in such instances must be true and the other false he also insists that we cannot say determinately that this or that is false but must leave the alternative undecided

Aristotle s view with regard to propositions about future particular events is that our judgments cannot be either true or false not because of insufficient knowledge on our part but because future particulars are in themselves always contingent Nothing in the nature of things or causes—existent in the past or present—necessarily determines them to happen They will occur only if independent causes happen to coincide Since these causes are independent—not determined to combination by their natures—the coincidence will be a matter of chance not of necessity

This theory of contingency in the realm of change—involving an affirmation of the real existence of contingent events—raises problems for the theologian concerning God s knowledge and will Does the fact that nothing happens contrary to God s will imply that whatever happens happens necessarily? Aquinas answers that God wills some things to be done necessarily some contingently Therefore to some effects He has attached necessary causes that cannot fail but to others defectible and contingent causes from which arise contingent effects it being His will that they should happen contingently

Similarly the fact that God knows all things

infallibly does not seem to Aquinas to be in consistent with the real contingency of some things He explains that whoever knows a contingent effect in its causes only has merely a conjectural knowledge of it But God knows all contingent things not only as they are in their causes but also as each one of them is actually in itself Hence it is manifest that contingent things are infallibly known by God inasmuch as they are subject to the divine sight in their presentiality yet they are future contingent things in relation to their own causes

This has a bearing on the difference between human and divine apprehension of future contingent things Things reduced to actuality in time Aquinas declares are known by us successively in time but by God they are known in eternity which is above time Whence to us they cannot be certain since we know future contingent things only as contingent futures but they are certain to God alone Whose understanding is in eternity above time Just as he who goes along the road does not see those who come after him whereas he who sees the whole road from a height sees at once all those travelling on it Hence Aquinas continues what is known by us must be necessary even as it is in itself for what is in itself a future contingent cannot be known by us But what is known by God must be necessary according to the mode in which it is subject to the divine knowledge but not absolutely as considered in its proper causes It does not follow therefore that *everything known by God must necessarily be* for that statement according to Aquinas may refer to the thing or to the saying If it refers to the thing it is divided and false for the sense is *Everything which God knows is necessary* If understood of the saying it is composite and true for the sense is *This proposition that which is known by God is is necessary*

With regard to human knowledge Aquinas makes another distinction in answering the question whether man can have scientific or certain knowledge of contingent things If as Aristotle seems to hold the objects of knowledge are necessary not contingent things then the realm of contingency belongs to opinion conjecture or probability Insofar as the particular events of nature are contingent they cannot be objects of scientific knowledge But according to Aquinas contingent things can be considered in two ways either as contingent or as containing some element of necessity since every contingent thing has in it something necessary for example that Socrates runs is in itself contingent but the relation of running to motion is necessary for it is necessary that Socrates moves if he runs

The contingency that Socrates *may* or *may not* run does not alter the hypothetical necessity that *if* he runs he *must* move In its concern with contingent things natural science is concerned only with such hypothetical necessities Unlike physics other sciences may deal with absolutely necessary things That the objects of mathematics are of this sort seems to be an opinion shared by James and Kant Hume and Descartes Plato and Aristotle But they do not agree on whether the necessities of mathematics belong to reality or have only ideal existence *i e* whether they exist apart from or only in the human mind This issue is connected with another major issue concerning necessity and contingency namely whether any reality has necessary existence

As WE HAVE SEEN those who discuss necessity and contingency in the domain of human acts and natural events seem to construe these alternatives differently according as they conceive liberty and chance in terms of different theories of causation With regard to being or real existence however there seems to be a common understanding of the alternatives even among those who do not agree that God alone is a necessary being because they think that this world is also determined to exist as a necessary consequence of God s existence

In the preceding discussions one meaning of contingency has repeatedly appeared The contingent is that which can be otherwise That which cannot be otherwise is necessarily as it is writes Aristotle and from this sense of necessary all its other meanings are somehow derived This insight is sometimes expressed by the statement that the opposite of the necessary is the impossible whereas the contingent—which is neither necessary nor impossible—includes contrary possibilities

In logical analysis what is called the modal

ity of necessity is attributed to judgments the contradictories of which are self contradictory e g if the proposition the whole is *not* greater than any of its parts represents an impossible judgment then the contradictory proposition the whole *is* greater than any of its parts represents a necessary judgment In contrast as Hume points out *that the sun will not rise to morrow* is no less intelligible a proposition and implies no more contradiction than the affirmation *that it will rise* These two propositions represent contrary possibilities No matter which turns out to be true the event could have been otherwise

In logical analysis some complication seems to arise from the fact that the necessary has two opposites *the impossible on the one hand* and the possible or contingent on the other This is usually clarified by the recognition that the possible is the opposite of the impossible as well as of the necessary In that sense of possible which excludes only the impossible the necessary is of course possible for what is necessary cannot be impossible But in that sense of possible which implies contrary possibilities the possible excludes the necessary as well as the impossible

From the proposition it may be it follows according to Aristotle that it is not impossible and from that it follows that it is not necessary it comes about therefore that the thing which must necessarily be need not be which is absurd But again the proposition it is necessary that it should be does not follow from the proposition it may be nor does the proposition it is necessary that it should not be For the proposition it may be implies a two-fold possibility while if either of the two former propositions is true the twofold possibility vanishes For if a thing may be it may also not be but if it is necessary that it should be or that it should not be one of the two alternatives will be excluded It remains therefore that the proposition it is not necessary that it should not be follows from the proposition it may be For this is true also of that which must necessarily be

Of the same thing we can say that it *may* be and that it *may not* be but we cannot say of the same thing both that it *may* be and that it *must* be or that it *may not* be and that it *cannot* be As Aristotle traces the implications of these modes of to be we see that *may be* implies *may-not be* which contradicts *must be* and similarly that *may-not be* implies *may-be* which contradicts *cannot be*

When we pass from the analysis of propositions or judgments to the consideration of being or existence the situation is simpler Since the impossible is that which cannot exist whatever does exist must either be necessary or possible Here the necessary and the possible are generally understood to exclude one another The necessary is that which *cannot* not be the possible that which *can* not be

In spite of this common understanding of the *alternatives there are basic differences* among the authors of the great books in regard to the analysis or demonstration of necessary being

Aristotle for example tends to identify the possible with the perishable—with that which both comes into being and passes away Those substances are necessary in contrast which are not subject to generation and corruption Holding that the matter of the celestial bodies differs from that of terrestrial bodies with respect to the potentiality for substantial change Aristotle seems to regard the heavenly bodies as necessary beings eternal in the sense of always existing even though changeable in regard to place *i e* subject to local motion The changing things of this earth are all contingent in being for the mutability to which their matter inclines them includes coming to be and passing away

This analysis of necessity and contingency in terms of matter s potentialities leads to another *conception of necessary being*—that of a totally immutable being which has necessary existence because it lacks matter entirely and since it consists of form alone is purely actual Whether *or not there are for* Aristotle substances other than the prime mover which are necessary because they are immaterial beings he attributes pure actuality only to that one necessary being *which is an unmoved* mover

Aquinas seems to adopt both of Aristotle s senses of necessary being He treats the celestial bodies and the angels as having necessity to the extent that they are immutable But their immutability is limited in his opinion to the

fact that they are by nature imperishable—the celestial bodies because of their matter the angels becaus they are simple substances not composed of matter and form Since they are creatures they cannot be altogether immutable All creatures Aquinas writes before they existed were possible —and in this sense con tingent as regards their being not necessary As it was in the Creator s power to produce them before they existed in themselves he continues so likewise is it in the Creator s power when they exist in themselves to bring them to nothing Furthermore at every moment of their existence their contingent being depends upon God s power God preserves them in being Aquinas says by ever giving them existence for if He took away His action from them all things would be reduced to nothing

In the strict sense then of necessary being no creature but only God the uncreated be ing is truly a necessary being—because in God alone existence is identical with essence Only a being whose very essence it is to exist is inca pable of not existing only such a being is nec essary in the sense of being purely actual All creat d things must be contingent for if in their case to exist belonged to their very na tures God could not have created them by causing their natures to exist nor when they did exist would His power be necessary to sus tain them in being

Where Aquinas defines God s necessity in terms of the *identity* of essence and existence Descartes and Spinoza tend to conceive God as necessary because his essence is such that his existence *follows from* it The difference may affect the meaning with which it is said that God is uncaused or that God is self caused If its existence is caused Aquinas writes noth ing can be the sufficient cause of its own exist ence According to Descartes to say that God is cause of His own existence merely means that the inexhaustible power of God is the cause or reason why he needs no cause

Descartes position seems to be that that which is self caused in the sense of having its existence d termined by its own nature or es sence is also uncaused in the sense that its exist ence is not caused by anything outside itself Existence he writes is involved in the essence of an infinite being no less than the equality of its angles to two right angles is in volved in that of a triangle But though this suggests the notion of God s existence follo v ing from His essence Descartes also says that in God existence is not distinguished from essence

For Descartes as for Aquinas the basic point remains that that which does not depend for its being upon any external cause exists neces sarily Descartes furthermore associates the necessary existence of an independent being with that being s infinity or perfection of na ture That which is conceived as infinite or per fect cannot be conceived as lacking existence The notion of po sible or contingent exist ence he says belongs only to the concept of a limited thing

Like Descartes Spinoza conceives God as the only infinite and immutable being which exists necessarily in the sense of being that whose essence involves existence But unlike him Spinoza also attributes necessity in an other sense to every finite and mutable thing which God causes to exist for in his view God not only exists necessarily but acting from the necessity of His own nature God also necessi tates whatever follows as a consequence of His action No other world than this is poss ble Things could be produced by God Spinoza writes in no other manner and in no other order than that in which they have been pro duced Furthermore since whatever is in God s power necessarily follows from it and consequently exists necessarily it is impossible for this world not to have existed The existence of this particular v orld is as inseparable from God s ex stence as God s own existence is in separable from His essence or nature

In the tradition of v estern thought there is perhaps no deeper theological issue than that which opposes the freedom of God s will to the necessity of God s acting according to His nature and which in consequence sets the possibility of other worlds (or even of no world at all) aga nst the necessity that if God exists this particular world inevitably follo s

Taking the other s de on both points, Aqui nas for example argues that since the good ness of God is perfect and can exist w thout other thing inasmuch as no perfection can

accrue to Him from them it follows that His willing things apart from Himself is not absolutely necessary As for the particular features of this world Aquinas says that since God does not act from natural necessity nor from a will that is naturally or from necessity determined to the things which exist it follows that in no way at all is the present course of events produced by God from any necessity so that other things could not happen Wherefore we must simply say that God can do other things than those He has done Other and even better worlds than this are possible for God could make other things or add something to the present creation and then there would be another and a better universe

Nor does the Christian theologian admit that the divine nature is subject to any necessity We do not put the life of God or the foreknowledge of God under necessity writes Augustine if we should say that it is necessary that God should live forever and foreknow all things as neither is His power diminished when we say that He cannot die or fall into error—for this is in such a way impossible to Him that if it were possible for Him He would be of less power But assuredly He is rightly called omnipotent though He can neither die nor fall into error For He is called omnipotent on account of His doing what He wills not on account of His suffering what He wills not for if that should befall him He would by no means be omnipotent Wherefore He cannot do some things for the very reason that He is omnipotent

One other traditional issue is raised by the conception of God as a necessary being or more strictly as the only necessary being in the sense of having a nature which involves existence It is formed by opposite views of the validity of the so-called ontological or *a priori* argument for God s existence

Both Descartes and Spinoza argue like Anselm and others before them that since God cannot be conceived as not existing it is impossible in fact for God not to exist Those who reject such reasoning do not deny that it is unintelligible or self contradictory to think of God as merely possible rather than necessary *i e* as requiring a cause outside Himself in order to exist Kant for example admits that existence must be included in the conception of God as *ens realissimum*—the most real and perfect being But he denies that the real existence of the object so conceived is implied by the logical necessity of the conception itself

This amounts to saying that it is possible for a being we cannot conceive except as existing not to exist Aquinas seems to make the same critical point when he says that even if every one understood by the word God something than which nothing greater can be conceived and therefore a being necessarily existing still it would not follow that he understands that what the word signifies actually exists but only mentally

Stated in its most general form the problem is whether that which is inconceivable by the human mind is impossible in reality or whether that which is logically necessary or necessary in thought is also necessary in fact or existence However that issue is resolved it must be noted that among the so-called *a posteriori* demonstrations of God s existence or arguments from the existence of certain effects to the existence of their cause one mode of reasoning turns upon the distinction between contingent and necessary being

If contingent beings exist (as it is evident they do from the mutability and perishability of physical things) *and if* each contingent being is by definition incapable of causing its own existence *and if* one contingent being cannot cause the existence of another *and if* everything which exists must have a cause for its existence either in itself or in another then from all these premises it would seem to follow that a necessary being exists

Here the conclusion may follow with logical necessity from the premises but whether it is necessarily true depends upon the truth of the premises That in turn seems to depend upon the understanding of what it means for anything to be contingent or necessary in being It may also depend on whether or not the reasoning escapes Kant s criticism of all *a posteriori* arguments for the existence of a necessary being namely that such reasoning always implicitly contains the ontological argument and is thereby invalidated

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in **4** Homer *Iliad* BK II [265 283] **12d** the number **4** is the number of the volume in the set the number **12d** indicates that the passage is in section d of page 12

Page Sections When the text is printed in one column the letters a and b refer to the upper and lower halves of the page For example in **53** James *Psychology* **116a 119b** the passage begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the page For example in **7** Plato *Symposium* **163b 164c** the passage begins in the lower half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

Author's Divisions One or more of the main divisions of a work (such as PART BK CH SECT) are sometimes included in the reference line numbers in brackets are given in certain cases e g *Iliad* BK II [265 283] **12d**

Bible References The references are to book chapter and verse When the King James and Douay versions differ in title of books or in the numbering of chapters or verses the King James version is cited first and the Douay indicated by a (*D*) follows e g Old Testament *Nehemiah* 45—(*D*) *II Esdras* 7 46

Symbols The abbreviation esp calls the reader's attention to one or more especially relevant parts of a whole reference passim signifies that the topic is discussed intermittently rather than continuously in the work or passage cited

For additional information concerning the style of the references see the Explanation of Reference Style for general guidance in the use of *The Great Ideas* consult the Preface

1 The meaning of necessity and contingency the possible and the impossible

7 Plato *Cratylus* **103d 104a** / *Timaeus* **455c 456a 459d 465d-466a**

8 Aristotle *Interpretation* CH 9 **28a 29d** CH 13 **33d 35c** / *Prior Analytics* BK I CH 13 **48a 49a** / *Posterior Analytics* BK II CH 11 [94^{b}26-95 9] **129c d** / *Topics* BK II CH 6 [112^{b}1 21] **157d 158a** / *Physics* BK II CH 4-6 **272 275a** BK III CH 4 [203^{b}25 29] **281d** / *Heavens* BK I CH 11 [281 2] CH 12 [283^{b}22] **372c 375d** BK II CH 5 [28 ^{b}22 6] **379b** CH 8 [289^{b}22 28] **381b** / *Metaphysics* BK V CH 5 **535c 536a** CH 12 [1 19 23 33] **541a** BK IX CH 3 [1047^{a}24 29] **572c** CH 4 **572d 573a** CH 8 [1049^{b}13 18] **575b** BK XI CH 8 [1065^{a}6-^{b}4] **593b d** BK XII CH 7 [1072^{b}4 14] **602c d**

9 Aristotle *Motion of Animals* CH 4 [699^{b}12 700^{a}5] **234d 235a** / *Rhetoric* BK I CH 19 [1392 8 1393 9] **639c 640c**

17 Plotinus *Fourth Ennead* TR VIII CH 4-5 **203a c** / *Sixth Ennead* TR VIII CH 9 **347a b**

18 Augustine *Christian Doctrine* BK II CH 35 **653b-c**

19 Aquinas *Summa Theologica* PART I Q 2 A 3 ANS **12c 14a** Q 14 A 8 REP 2 **82c 83b** A 9 ANS and REP 3 **83b d** A 13 **86d 88c** Q 19 A 3 esp REP 4 **110b 111c** A 8 **116 d** Q 22 A 2 esp REP 4 5 **128d 130d** A 4 **131c 132b** Q 23 A 6 **137d 138c** Q 25 A 3 ANS and REP 4 **145b-147a** Q 41 A 2 REP 5 **218c 219d** A 4 REP 2 **221c 222b** Q 46 A 1 REP 1 2 **250a 252d** Q 79 A 9 REP 3 **422b-423d** Q 82 A 1 A 5 **431d 432c** Q 86 A 3 ANS **463b d** PART I-II Q 4 A 1 ANS **629d 630b** Q 10 A 4 REP 3 **665d 666a c** Q 13 A 6 ANS **676c 677b** Q 4 A 3 REP 2 **794c 795a**

20 Aquinas *Summa Theologica* PART I-II Q 112 A 3 ANS and REP 1 **358a d** PART III Q 65 A 4 ANS and REP 1 **883d 884a c**

23 Hobbes *Leviathan* PART II **113b-c**

31 Descartes *Meditations* V **93b 94c** / *Objections and Replies* **112d 114c 126b-127** AXIOM X **132b**

31 Spinoza *Ethics* PART I DEF 7 **355b** PROP 33 SCHOL 1 **367c d** PART IV DEF 3 4 **424a**

33 Pascal *Pensées* 469 2 6a

35 Hume *Human Understanding* SECT VI **469d-478a** SECT VIII DIV 62-75 **478b-485a** passim esp DIV 64 **478d-479b** DIV 72 **483a c** DIV 75 **484c 485a**

42 Kant *Pure Reason* **85d 88a 90c 91a 95a d 107b c 129 145c** esp **130b 133c 140b d 143a 175c d 176d 177a 179c 180c 185a b** / *Judgement* **550 578a** esp **550c d 552 d 555a b 564a 65b 568a-c 569a 570c 575b 603b-c**

46 H GEL *Philosophy of Right* ADDITIONS 162 143b-144c
53 JAM S *Psychology* 301b 302a 851a

2 Necessary and contingent being or existence

2a The independent or uncondit oned as the necessarily existent the uncaused or self ca sed the identity of essence and existence

OLD TESTAMENT *Exodus* 3 13 14
7 PLATO *Laws* BK X 762b 765d
8 ARI TOTLE *Interpretation* CH 13 [23 18 26] 35b-c / *Physics* BK III H 4 [203b25 29] 281d BK V II CH 5-6 340d 346b / *Metaphysics* BK V CH 5 [1015b9- 6] 536 K IX C 8 575b 577a BK XII CH 6-7 601b 603b esp CH 7 [107 b4-13] 602c d
12 LUCRETIUS *Nature of Things* BK I [483-634] 7 8d
17 PLOTINUS *Sixth En ead* TR VIII CH 7-21 345d 353d
18 AUGUSTINE *Confess ons* BK I P R I 3b c BK VI par 1-7 43b-45d par 16-23 48c 50c / *City of God* K VIII CH 6 268d 269c H II 272c / *Christ n Doctri* BK I CH 8 626c 627a CH 32 633c d
19 AQUINAS *Summa Theologica* PART I Q 2 A 3 ANS 12c 14a Q 3 A 4 16d 17c A 6 18c 19a A 7 ANS and R I 19a c Q 4 A I REP 3 20d 21b A 2 AN and REP 3 21b-22b A 3 REP 3 22b-23b Q 6 A 3 29c 30b Q 8 A I ANS 34d 35c Q 10 A 2 ANS and R P 3 41d 42c Q II A 4 ANS 49d 50b Q 13 A II ANS 73 74b Q 14 A 13 R I 86d 88c Q 19 A 3 110b 111c Q 8 A 2 158d 160a Q 50 A 2 REP 3 270a 272a Q 54 A I ANS 285a d A 3 REP 2 286c 287b Q 75 A 5 REP 4 382 383b P RT I II Q 3 A 7 ANS 628a d
20 AQUINAS *S mma Theolog ca* PART I I Q 93 A 4 218b d PART III Q 3 A 2 R 3 724a-c
31 D C RTES *Dis u se* PART IV 52d 53a / *M d t t ons* 71d 72a 73d 81d 89a V 93a 96a esp 93b 95b / *Objections and Replies* 108a 115a esp 110c 112a 112d 114c 126b 127 D E VI I 130d POSTU ATE V 131b c AXIOM I 131d AXIOM X 132b PROP I 132b c 158b 162 217d 218a
31 S OZ *Eth s* ART I DEF I 355a DEF 3 355b D F 6-8 355b c PROP 5-11 356b 359b PRO 14 359d 360a PRO 17 362b 363 PRO 19- 0 363c 364a PROP 24 365 PROP 34 369a
33 PASCAL *Pensées* 469 256a
42 K NT *Pure Rea* 97b-c 140b d 145c 153 164a 167a 170d 171a 177b 182b P 179c 182b 186 b 205a / *Pr tic l Reason* 291 292 / *J dgement* 587 c
46 H G L *Ph los phy f Right* PREF 6 7a P RT I par 66 29 / *Phil sophy f H tory* INTRO 156d 157b 160c d 161c 162a

2b The argument for the existence of a neces sary be ng the problem of logical and ontological necessity

7 PLATO *Laws* BK X 758b-765d esp 762b 765d
8 ARISTOTLE *Phys cs* BK VIII CH 1-6 334a 346b / *Metaphysics* BK IX CH 8 575b 577a BK XII CH 6-7 601b 603b
18 AUGUSTIN *Confess ons* BK I par 10 3b BK VII par 1 7 43b 45d par 16-23 48c 50c / *C ty f God* BK VIII CH 6 268d 269c / *Chri tian Doctr ne* BK I CH 8 626c 627a
19 AQUINAS *Summa Theologica* PART I Q 2 10c 14a Q 8 A I 34d 35c Q 19 A 5 R P 3 112d 113c Q 44 A I 238b 239a Q 65 339a 343c Q 104 AA 2 534 537b
22 C IAUCER *Kn ght s Tale* [3001 3016] 209a b
31 DESCARTES *D scourse* PART IV 51d 53a / *Meditations* 71d 72a 73d III 81d 89a esp 84a 87 V 93 96a esp 93b 95b / *Obj ctio s and Replies* 108a 114c 126b 127c DEF VIII 130d POSTULAT V 131b-c AXIOM I 131d AXIOM X 132b PROP I II 132b c 158b 162a
31 SPINOZA *Eth cs* PART I DEF I 355a DEF 3 355b DEF 7-8 355b-c PROP 5 II 356b-359b PROP 19-20 363c 364a PROP 34 369a
33 PASCAL *Pens s* 469 256a
35 LOCKE *Hum n Understand ng* BK II CH XVII SECT 17 172b S CT 2 173a BK IV CH X S CT I 12 349c 352b esp SECT 7 350d 351a
35 BERKELEY *Human K owledge* SECT 25 33 417d 419a esp SECT 28-33 418b-419a ECT 146-149 442a d
35 HUM *Human Understa d g* SECT XI 497b 503 pa m esp DIV I 5 503b c
42 KANT *Pu e Reason* 85d 93 esp 87d 88 143a 145c 152a 153 esp 153a 177b 192d e p 177b 179 182c 185c 190a c 205a b / *Pract cal R as n* 310d 311d 334b 337a c / *Judg m t* 568c 570a 570c 571c 600d 603d esp 601d 602a 606d 609b e p 608a 609b

2c Mutab lity in relation to nece s ty in being

8 ARISTOTL *I t pret tion* CH 13 [23 18 26] 35b / *Phy* BK VIII CH 1-6 334a 346b / *Heavens* K I CH 3 360d 362a K II CH 1 375b d 376a CH 5 [287b22 6] 379b / *Gen er tion and Corrupt n* BK II CH 439c 441a c / *Metaphys s* K V CH 5 [15b9-16] 536a BK IX H 8 [1 49b11 18] 575b [1050b 6 34] 576b d BK X H 10 586c d BK X CH 6 [63 13 16] 591b K X I CH 6 7 601b 603b H 8 [1 73 24 39] 603
17 PLOTINUS *S xth E n ad* TR VIII CH 9-1 347a 348a
18 AUGUSTIN *Co f s* BK IV par 5 9 23a 24b K VII par 7 43b 45d p 16- 3 48c 50 K X p 9 101b par 8 20 103 d / *C ty of G d* K II H 6 268d 269 K X 5 351b 352d / *Chr D ctrin* K I C 3 633 d

(2 *Necessary and contingent being or existence* 2c *Mutability in relation to necessity in being*)

19 Aquinas *Summa Theologica* part i q 2 a 3 12c 14a q 10 a 5 44b 45c q 14 a 13 ans and rep 1 86d 88c q 19 a 3 rep 4 5 110b 111c a 8 116a d q 44 a 1 rep 2 238b 239a q 50 a 5 esp rep 3 274b 275a q 63 a 1 rep 2 325c 326c q 66 a 2 345d 347b q 86 a 3 463b d

20 Aquinas *Summa Theologica* part iii suppl q 91 a 1017c 1020c

21 Dante *Divine Comedy* paradise xiii [52 87] 126a b

31 Descartes *Discourse* part iv 52a d / *Meditations* iii 86b 87b 88c iv 89b / *Objections and Replies* 113c 114a axiom x 132b prop iii 133a 158b 162a

31 Spinoza *Ethics* part i def 1-2 355a def 6-8 355b c prop 6-8 356b 357d prop 11 13 358b 359d prop 17 362b 363 prop 20 corol 2 364a prop 24 29 365a 366c prop 33 367b 369a part ii axiom 1 373c

42 Kant *Pure Reason* 74b 76c

46 Hegel *Philosophy of History* intro 156d 157c

2d The necessary and contingent with respect to properties accidents and modes

7 Plato *Phaedo* 244b 246c

8 Aristotle *Prior Analytics* bk i ch 13 [32^b 4 14] 48b c / *Posterior Analytics* bk ch 4 100a 101b / *Topics* bk v ch 1 178b d 179b ch 3 [13 ^{b}19-37] 182b c bk vi ch 14 [51 32 ^{b}2] 206b-c / *Physics* bk i ch 3 [186^{b}19-30] 261d ch 4 [88 5 13] 263b bk ii ch 1 [192^{b}35 39] 269a bk vi ch 3 [246^{b}3-9] 329c d / *Metaphysics* bk ch 30 547a d bk vi ch 2 3 548c 549d bk vi ch 2 561b-562a bk x ch 9 586a c bk xi 8 593a d bk xiv ch 6 625d 626d esp [1093^b 7 22] 626c d

12 Lucretius *Nature of Things* bk i [449-482] 6c 7a

19 Aquinas *Summa Theologica* part i q 3 a 4 ans 16d 17c a 6 18c 19a q 9 a 2 ans 39c 40d q 54 a 3 rep 2 286c 287b q 77 a rep 5 399c-401b a 6 ans 404c 405c q 86 a 3 463b-d q 1 1 a 1 rep 1 522 523a part i q 2 a 6 ans 619d 620d q 7 651d 655a passim q 1 a 1 rep 2 662d 663d q 18 a 3 rep 2 695d 696b

20 Aquinas *Summa Theologica* part i ii q 72 a 5 115a 116b part ii q 2 a 2 ans 711d 712d

30 Bacon *Novum Organum* bk ii aph 33 161b-d 36-37 164a 169c

31 Descartes *Objections and Replies* 152d 231a b

31 Spinoza *Ethics* part i def 4-5 355b prop 10 schol 358a b prop 15 demonst 360

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35 Locke *Human Understanding* bk iii ch 268b 283a passim esp sect 5 269b d bk iv ch iii sect 9-16 315c 317c ch vi sect 5 16 332b 336d passim ch xii sect 9 360d 361b

42 Kant *Pure Reason* 75d 76a 131c d / *Judgement* 566a d 580c d

53 James *Psychology* 668a 671a

3 Necessity and contingency in the realm of change chance and determinism

5 Aeschylus *Prometheus Bound* [507-5 0] 45a b

7 Plato *Republic* bk x 438c-439a / *Timaeus* 455c 456a 465d 466a / *Statesman* 587a 589c / *Laws* bk x 759d 765d

8 Aristotle *Interpretation* ch 9 28a 29d / *Posterior Analytics* bk ii ch 11 [94^{b}26-95^{a}9] 129c d / *Topics* bk ii ch 6 [112^{b}1 21] 157d 158a / *Physics* bk ii ch 6 [198 5 13] 275a ch 8 [199 34 ^{b}12] 276c d ch 9 277b 278a c / *Heavens* bk ii ch 5 [287^{b}22 26] 379b ch 8 [289 22 28] 381b bk iv ch 13 [310 23 32] 401d / *Generation and Corruption* bk i ch 6 [333 35 334 9] 434b-435a ch 11 439c-441a / *Metaphysics* bk vii ch 7 [1 32 25 22] 555a b bk ix ch 5 573a c bk xi ch 8 593a d bk xii ch 3 [1070 4-9] 599b

9 Aristotle *Parts of Animals* bk i ch 1 [64 10 ^{b}5] 162b 163a / *Ethics* bk iii ch 3 [11 2 18 3] 358a b bk x ch 3 [1173^{b}4 7] 427d / *Rhetoric* bk i ch 10 [1369 31 ^{b}4] 612c d

12 Lucretius *Nature of Things* bk i [1022 1034] 13c d bk ii [184 307] 17b-19a [1052 1 63] 28b-c bk v [55-58] 61d [306-310] 65a [4 6-431] 66c d

12 Aurelius *Meditations* bk ix sect 28 293d 294a sect 39 295a

17 Plotinus *Third Ennead* tr i 78a 82b tr ii ch 1 82c / *Fourth Ennead* tr iii ch 16 150c d tr iv ch 34 176b d

19 Aquinas *Summa Theologica* part i q 14 a 13 86d 88c q 19 a 3 110b 111c a 8 116a d q 22 a 2 128d 130d a 4 131c 132b q 23 a 6 137d 138c q 25 a 3 rep 4 145b 147a a 4 147a d q 86 a 3 463b-d q 103 a 1 rep 3 528b 529a aa 7-8 533b-534b q 115 a 6 ans 591d 592d

30 Bacon *Advancement of Learning* 45b c

31 Descartes *Discourse* part v 55a 56a

31 Spinoza *Ethics* part i def 7 355b axiom 3 355d prop 17 corol 2 362b prop 26 29 365b 366c prop 32 33 367a 369a part ii 36 369a b part ii prop 13 377d 378c lem 3 corol 378d 379a prop 48 391a c part iii 39 a d part iv prop 2 4 425a d appendix i ii 447a b

4 Necessity and contingency in the realm of thought

4a The necessary as the domain of knowledge the cont ngent as the object of opinion certa nty doubt and probability neces sary truths

7 PLATO *Republic* BK VI 384b 388a
8 ARISTOTLE *Categories* CH 5 [4 10 b19] 8b 9a / *Prior Analytics* BK I CH 13 [3 b4 23] 48b-d / *Po terior Analyt cs* BK I CH 2 [71b8 16] 97d 98a [72a25 b4] 98d 99a CH 4 8 100a 104b CH 30 119d CH 33 121b 122a c / *Metaphys cs* BK VI C I 2 548c 549c BK VII CH 15 [1039b31 1040 8] 563d 564a BK IX CH 10 577c 578a c BK XI CH 8 [1064b15 1065 6] 593a b
9 ARISTOTLE *Ethics* K I CH 3 [1094b23 27] 339d 340a BK III C I 3 [1112 19-b12] 358a c BK VI CH 3 [1139b18 24] 388b c CH 5 [140 30 b1] 389a b [1140b24 28] 389c / *Rheto ic* BK I CH 2 [1357 14 b21] 596d 597c
19 AQUINAS *Summa Theolo ica* P RT I Q 14 A 13 NS and REP 3 86d 88c Q 19 A 3 REP 6 110b 111c Q 47 A I REP 3 256a 257b Q 79 A 9 REP 3 422b 423d Q 82 A 2 ANS 432d 433c Q 86 A 3 463b d
20 AQUIN S *Summa Theologica* I ART I I Q 84 A I R P 3 174b 175a Q 94 A 4 ANS 223d 224d
31 D SCARTES *Rules* II 2a 3b XII 21d 22b / *Disco rse* P RT II 47a PART IV 52a / *Medi tat ons* I 75a 77c 95b 96a / *Objections and Repl s* 124d 125a
31 SPI OZA *Eth cs* PART II PROP 44 389b 390a
35 LOCKE *Human Understa d ng* BK IV CH III SECT 9-16 315c 317c esp SECT 14 316b d SECT 28 29 322a 323a CH VI SECT 5 16 332b 336d pass m C I IX SECT I 349a C XII SECT 9 360d 361b CH XV SEC I 3 365 d CH XVII SECT 2 371d 372b SECT 15 17 378d 379c
35 HUME *Human Understa d g* SECT IV DIV 20- I 458a-c DIV 30 462 SECT XII DIV 131 132 508d 509d passim
42 K NT *Pur Reas n* I -4 c 194b c 228c d 240b-243c / *Int o Metaphysic of Mo als* 387a d / *Judgement* 601d 603a b 603d 604b
51 TOLSTOY *War and Peace* BK IX 365a b BK X 441b-442a
53 J ES *Psychol gy* 851a 890a esp 851a 867a 868b 879b 889a 890

4b Practical necess ty as a cause of bel ef

31 DESCA TES *Disco rse* P RT I I 48b 50b / *Objecti s and Repl e* 126a b
33 PASC L *Pensées* 184 241 205 217b
35 HUME *Huma Understand g* SECT XII DIV 126-128 507a 508a
42 KANT *Pure Reaso* 124d 128a 236b-243c esp 239 240b 241d 242c / *Fund Pr n Meta physic of Morals* 279b d 287d / *Practical Reason* 291a 292a 314d 321b 344a 349b 351b 352c / *Intro Metaphysic of Morals* 390b d 391a / *Judgement* 588a 607c e p 593d 596c 599d 600d 601d 602a, 603a b 604d 606d 608c 611d
53 JA ES *Psychology* 223a 225a esp 224a 225a 653a 820b 823b esp 822b 823b

4c The truth of judgments concerning future contingents

8 ARISTOTLE *Interpretation* CH 9 28a 29d
18 AUGUSTINE *C ty of God* BK V CH 10 215c 216c
19 AQUIN S *Summa Theologica* PART I Q 14 A 13 86d 88c Q 57 A 3 297b 298a Q 86 A 4 463d 464d
21 DANTE *Divine Comedy* PARADISE XVII [13 45] 132b c
22 C IAUCER *Troilus and Cressida* BK IV STANZ 145 146 107b
32 MILTON *Paradise Lost* BK III [80-134] 137a 138a
51 TOLSTOY *War and Peace* BK IX 365a b BK X 441b 442 BK XIII 584c 585c EPI LOGUE II 685a

4d Mathematical necessity necessity in the objects of mathematics and in mathe matical reasoning

7 PLATO *Republic* BK V 361b-c
8 ARISTOTLE *Physics* BK II CH 9 [20 I5 29] 277c d
31 DESCARTES *Rul s* II 3a b / *Discourse* PART II 47b c I ART IV 52d 53a / *Meditati ns* V 93b c / *Object ons and Repl es* 113c 114a
35 LOCKE *Human Understa di g* BK IV CH III S CT 18 20 317d 319c SECT 29 322c CH IV SECT 6 325 b CH VII SECT 6 338b-c C I X I SECT 3 364a
35 HU IE *Hu man Understanding* SECT IV DIV 20 458a b SECT XII D V 131 508d 509a
42 KANT *Pu e Reason* 15c 16c 17d 18d 68a 69c 211c 218d esp 211c 212a 215d 217a 228c d / *P act cal Reason* 295b d 330d 331a / *P f Metaphysical Elements of Ethics* 376c d / *Science of Ri ht* 398c 399c esp 399a b / *Judgement* 551a 553c
46 HEGEL *Pl losophy of Right* INTRO par 2 9b 10a
53 JA S *Psychol gy* 874a 878a

4e Necessity and cont ngency in logical analys s

4e(1) The modal ty of propositions or judg ments mod l oppos tion

8 ARISTOTLE *Interpretati n* CH 12 13 32d 35c / *Prio An lytics* BK I C I 3 40a-c
19 AQUIN S *Summa Theol gica* PART I Q 14 A 13 REP 2 86d 88c

4 KANT *Pure Reason* 14c 15c 39c 41c esp 40d-41c / *Jud ement* 603a b
53 J ies *Psychology* 851a

4c(2) Modal ty in reasoning the logical ne cessity of inference the necessity and contingency of premises and conclusions

8 ARISTOTLE *Prio A alytics* BK I CH I [24b18 26] 39c CH 8 22 45b 57b / *Posterior Analytics* BK I CH 6 [5 21 29] 103b / *Metaphys cs* BK V CH 5 [1015b6-9] 535d 536a
9 ARIST TLE *Rhetoric* BK I CH 2 [1357a14 30] 596d 597
12 EPICTETUS *Discourses* BK I CH 7 112d 113d CH 26 131b
18 AUGUSTINE *Christian Doctrine* BK I CH 31-34 651d 653b
19 AQUINAS *Summa Theologica* PART I Q 19 A 8 REP 3 116a d Q 44 A I REP 2 238b 239 Q 82 A 2 ANS 432d 433c PART I II Q 13 A 5 ANS 675c-676b A 6 REP I 2 676c 677b
23 HOBBES *Leviathan* PART I 65c-d 71c
42 KANT *Pure Reason* 14d 17d 18a 110d 111a 194b d

5 Necess ty and contingency in human life and society

5a Liberty and necessity in human conduct the voluntary nd the compulsory

4 HOMER *Iliad* 3a 179d esp BK XXIV [513-551] 176d 177a
5 AE CHYLUS *Ag memno* [160 226] 53d 54c
5 EURIPIDES *Hecuba* [864 867] 360b
6 THUCYDIDES *Peloponnes n War* BK IV 461d 462a BK V 506b c
7 PLATO *P otag ras* 56b 59c 64a / *Cr tylus* 95b-c / *Republ c* BK V 361b c BK X 439b 441a c
8 ARI T TLE *Metaphys cs* BK IX CH 5 573a c
9 ARISTOTLE *Ethics* K I I CH I 3 355b d 359a / *Rh t ic* K I CH 2 [1357a14 b21] 596d 597c CH 10 [368b1 1369b27] 611 613a CH 11 [137 8 17] 613b c
12 LUCRE IUS *N ture of Things* BK I [251 293] 18b-d
12 AU LIUS *M d tatio s* 253 310d esp K V * T 8 269d 270b S CT 19-) 272 BK V S CT 8 274b S CT 13 274c ECT 39 277d SECT 50 279a b SECT 58 279d BK VI SECT 54 283b SECT 58 283c d SECT 68 284c d K VIII SECT 17 286d ECT 32 287d 288a SECT 35 288b S CT 45 47 289a c, BK IX SECT 41 295c BK X SECT 3 296d SECT 6 297 b SECT 25 299c SECT 33 300c 301a c 35 301b BK XI SECT 3 307b d SECT 11 13 308b-c
15 T TL *A als* BK IV 68d 69b BK VI 91b-d
17 PLOTINUS *Third En ad* TR I CI 8 10 81d 82b
18 AUGU TINE *Conf ssions* BK VIII par 10 11 55c 56b BK X par 65 88a / *City of God* BK V CH I 10 207d 216c BK XIX CH 5-6 513d 515a C I 15 521a / *Chr st an Doctrine* BK II CH 25 26 649b-650 CH 39 40 654c-656a
19 AQUINAS *Summa Theolog ca* P RT I Q 23 132b-141b Q 83 A I 430d 438a PART I II QQ 6-10 644a 666a c
21 DANTE *D i e Comedy* PURGATORY XVI [2 114] 77b-78a PARADISE I [94 142] 107b d VIII [91 148] 117d 118c
22 CHAUCER *Troilus and Cress da* BK IV STANZA 137 154 106b 108b / *Kn ght s Tale* [1312 1324] 181b [2987 3046] 209a 210a / *Nu s Priest s Tale* [15 236-256] 456b 457a
23 HOBBES *Leviathan* PART I 59b 86c PART II 112d 113c 163d 164a
25 MONTAIGNE *Essays* 52c 53c 216c 219a 5 8c 529b
26 SHAKESP ARE *J lius Caesar* ACT I SC II [13 141] 570d
27 SH KESPEARE *King Lear* ACT I SC II [128 164] 249a b ACT IV SC III [34 37] 272a
31 SPINOZA *Ethics* PART III 395a d PART IV P OP 2 4 425a d APPENDIX I II 447a b
32 MILTON *Pa ad se Lost* BK III [80-134] 137a 138a
33 PA CAL *Pensées* 821 331b 332a
35 LOCKE *Huma Understand ng* BK II CH XXI SECT 7 27 180a 184c SECT 57 193b-c SECT 73 198c 199c CH XXIII ECT 18 209a
35 BERKELEY *Human Know ledge* S CT 144 441d
35 H ME *Human Underst nd ng* SECT VIII 478b-487a
38 ROUS EAU *I equality* 337d 338a
42 K NT *Pu e Reason* 133a 190c d 234c 235a / *Fu d P n Metaphysic of Morals* 279b d 287d esp 279b d, 282c 286a c / *Practical Reason* 292a 293b 307d 314d / *Sci nce of Right* 400b d 402a / *Judgement* 571c 572a 587a 588a
44 BOSWE L *J hnson* 392d 393a 549c
46 HEGEL *Philosophy of Right* INTRO par 15 16a b PA T I par 91 92 35d 36a PART II p r 118 42d 43b ADDITIONS 12 118a c 75 128a / *Philo ophy of History* INTRO 158c 159b 160 190b passim, esp 162 165b 168a d 186b c
48 M LV LLE *Moby D ck* esp 121a 159 395a 397a
51 TOLSTOY *War and Peace* BK V 221b d BK V I 275a 276b BK V II 303d 304b BK IX 343b d EPI OGUE I 688a 694d
53 JA IE *Psychology* 84 94b esp 89b 93 291a 295b 387b 388a 796a 798b pa sim 820b 827a esp 821b 823b
54 FR UD *Orig n nd Dev lopment of Psycho An lysis* 13a-c / *General Int od ct* 453t 476a c pass m esp 454b 462d 486b-488c esp 486d 487a

44 BOSWELL *Johns n* 102a b 120a c 125c d
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49 D WIN *Des ent of Man* 579b 581c
50 MARX *Capital* 241c d
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54 FR UD *Civil zati n and Its Discontents* 781d 782d

5c Necess ty and cont ngency in relation to the natural and con ent on l n l w

9 ARISTOTLE *Eth cs* BK V CH 7 [1134^b18 35 4] 382c d
18 AU USTIN *Conf ssio* BK III par 15 17a b par 17 17d 18a
20 AQUINAS *Summa Theol gica* PART I II Q 94 AA 5-6 224d 226b Q 95 A N and REP 3 227c 228c A 4 229b 230 Q 96 A 1 230c 231c Q 97 A I R I 236a d A 4 R 3 238b 239b Q 99 AA 3-4 247a 248d
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31 S NOZA *Ethi s* PART IV PROP 37 CHOL 2 435b 436a
35 LOCKE *C vil Government* CH II SECT 0-12 27b 28a CH XI SECT 135 55d 56b
38 MONT SQUIEU *Sp rit f Laws* BK I 1c d K XV 109b-110a K XXVI 219d 221c
38 ROUSSEAU *S cial C tract* K II 399b
42 KANT *Scien e of Right* 426b-429 esp 426b c
43 FEDERAL ST NUM ER 5 91b d NUMBER 41 133a b NUM ER 43 143b c
43 MILL *Ut l t ia m* 470d 471b
46 HEG L *Ph l ophy of Right* PAR III par 145 55b p r 14 71a c D ITION 94 132b 34 138b c

5d The necessity or inevit b l ty of l ery po erty war or cr me

5 ARIST PHANES *Pea e* [106 114] 538a 539a / *Plut s* [415-619] 633d 636d
6 THUC D *P lopo n sian War* K III 427d-428a 436d-437d
7 PLATO *Republic* K I 316c 319a / *Laws* BK I 640d 641a
9 ARI TOTLE *Pol tics* BK I CH 5-6 447d 449b
12 EP CT TU *Disco ses* K I CH 19 125 d
18 AUGUSTIN *C ty of God* K I C I 10 172d 173 K XIX C I 5 514a b CH 7 515a I 15 521a-c
19 AQ INA *Summa Theol g c* ART I Q 9 A REP 488d-489d Q 96 A 4 512d 513c
20 AQU NAS *S mm The l g ca* P RT Q 94 5 REP 3 224d 225d
23 M CH AV LL *P in* C I II 5 CH XIV 21b CH XI 32a d
23 HO ES *Lei ath an* PART I 76d 94b PART II 141a b 157a
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32 MILTON *Parad s Lost* BK XI [384-897] 307b 318b
35 LOCKE *Ci il Go ernment* CH II 25d 28c CH III SECT 17 28d 29a CH IV 29d 30b CH XV SECT 1, 65b c
36 S VIFT *Gulliver* PART IV 154b 155b
38 MONTESQU U *Spir t of Laws* BK X 61b d 62b BK XV 109b 110 110d 111c
38 ROU SEAU *Inequality* 356c 357a 357c 358b / *Social Contract* BK I 388b c 389a 390d
39 S ITH *Wealth of Nations* K V 309a-c
42 K NT *Science of Right* 457a 458a c / *Judge m nt* 586a 587a
43 FEDERALIST NUM R 3-7 33b-44 passim esp NUM BER 6 39a NUM R 23 24 85a 89 NUMBER 28 96 NUM BER 34 110a d NUM B R 41 132c 135a NUM ER 43 141d
43 MILL *Repr sent tive Government* 339c 340c / *Utilitarianism* 452a b
44 BOSWELL *Johnson* 301d 304c
46 HEGEL *Philosoph of Right* P RT III par 333-334 109b-c / *Philosophy of History* PART II 273c
50 MARX *Capital* 283b c 303b 307 esp 303d 305a 307a c 315c 321b esp 319a 321b
50 MARX ENGELS *Communist Manifesto* 419b d-420 425a 428a b
54 FR UD *W r and Death* 755b 757a pass m esp 755b c 766 d / *Ci l at on and Its D ontents* 787a 788d

5e Economic necessit e or luxur e

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5 EURIPIDES *Pl oen cian M dens* [550-554] 382d
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8 ARI TOTLE *Topics* BK III CH 2 [118 6-16] 164d 165a
9 ARISTOTLE *P l t cs* BK I CH 8 [1256^b27 39] 450c d CH 9 [1257^b30- 258 18] 451d 452b K VII CH 5 [1326^b26 38] 530d 531a C I 13 [1331^b39 332 2] 536
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27 S AKE ARE *K ng Le* ACT I S V [63-74] 261 A C IV [7 36] 264
31 SPINO A *Ethics* PA T V ND X XX II - XX X 450
33 PASC L *Pr incial Letter* 91a 94a

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35 LOCKE *Civil Government* CH V 30b-36a passim
38 MONTESQUIEU *Spirit of Laws* BK VII 44a BK XIII 96a
38 ROUSSEAU *Inequality* 327c 328a 337b 350a-c 352a 353c 364a b 365c 366b / *Social Contract* BK I 393d 394b
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40 GIBBON *Decline and Fall* 22c
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46 HEGEL *Philosophy of Right* PART III par 190-191 66a b par 195 66d 67a par 203 68a c ADDITIONS 1 0 136b-c / *Philosophy of History* INTRO 193b c PART II 267a b
50 MARX *Capital* 16c 17a 81a d 88c 112a b 218d 219a 253b-254b 261c 262a 280d 283c esp 282d 283b 292 296a esp 293c 294a

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6 THUCYDIDES *Peloponnesian War* BK IV 462a b
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8 ARISTOTLE *Metaphysics* BK XII CH 8 (1074^{b} 11 13] 605a
14 PLUTARCH *Romulus* 18d 20b-c / *Timoleon* 195a 213d esp 201a 203b / *Philopoemen* 300b c / *Demosthenes* 698a 699a / *Marcus Brutus* 814d 815c
15 TACITUS *Annals* BK III 49c BK VI 91b-d / *Histories* BK II 232d 233a
18 AUGUSTINE *City of God* BK I PREF 129a-d CH 36 149c d BK II CH 2 3 150c 151c BK IV CH 33 206c d BK V CH 1 207d 208c CH 11 26 216c 230a c BK XV CH 1 397b d 398c CH 21 22 415b-416c BK XVIII CH 1 2 472b,d 473d
21 DANTE *Divine Comedy* HELL, VII [61-96] 10b c PURGATORY XVI [52 1 9] 77b-78a
23 MACHIAVELLI *Prince* CH VI 9a b CH XX 35a 36b
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40 GIBBON *Decline and Fall* 609b-c 630b
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50 MARX *Capital* 6d 7b-c 10b-11d 1 4a-c 378b-d
50 MARX ENGELS *Communist Manifesto* 421d 422c passim 425a b
51 TOLSTOY *War and Peace* BK III 143a-c BK IX 342a 344b BK X, 389a 391c BK XI 469a 472b BK XIII 563a 587d BK XIV 588a 590c 609a 613d BK XV 618b-621b 626d 630a EPILOGUE I 645a 650c EPILOGUE II 6 5a 696d
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CROSS REFERENCES

For Matters relevant to the distinction between necessary and contingent being *see* BEING 7b(3) CHANGE 15c ETERNITY 3 4b GOD 2b 4 and for the application of this distinction to properties accidents and modes *see* BEING 7b(5)-7b(6) 8c-8e NATURE 1a(1)

Matters relevant to the distinction between necessity and contingency in the realm of change *see* CAUSE 1-1a CHANCE 1a 2a FATE 3 NATURE 3c(1)

Other discussion of the distinction between knowledge and opinion and of the difference between certainty and probability *see* CHANCE 4 JUDGMENT 3 9 KNOWLEDGE 4b 6d(1)-6d( ) OPINION 1 3b TRUTH 2e WILL 3b(1)

The moral certainty of the things in which it is practically necessary to believe *see* GOD 2d IMMORTALITY 2a METAPHYSICS 2d WILL 5b(4)

Other discussion of the truth of propositions about future contingents *see* TIME 6f TRUTH 3b( )

Necessity and contingency in logical analysis and in mathematical reasoning *see* JUDGMENT 6c MATHEMATICS 1c OPPOSITION 1d(2) PRINCIPLE 2b(2) 5 REASONING 3d TRUTH 3b(3)-3c 2

For The opposition between necessity and liberty in the sphere of human life and history, *see* CAUSE 3; FATE 1-3, 5-6; HISTORY 4a(1); LIBERTY 1c, 4a; NATURE 2f, 3c(2); PRUDENCE 4a; WEALTH 11; WILL 5a(1)-5a(4), 5c, 6a, 7b; and for the related problem of divine providence in relation to human freedom, *see* FATE 4; GOD 7b; HISTORY 5a; LIBERTY 5a-5b; WILL 7c.

The necessary and contingent, or the natural and the conventional, with respect to the family and the state, and also in language and law, *see* CUSTOM AND CONVENTION 1; FAMILY 1; JUSTICE 10a; LAW 4f, 5c; NATURE 2b, 5c; PUNISHMENT 4c; STATE 3b-3c.

The consideration of the inevitability or necessity of certain social institutions or phenomena, such as slavery, poverty, or war, *see* LAW 4h; NATURE 5b; OPPOSITION 5c; SLAVERY 2, 3; WAR AND PEACE 7; WEALTH 9g, 10b.

Another discussion of the distinction of the necessary, the possible, and the probable in poetry, *see* POETRY 8a(2).

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.

II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

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LAPLACE. *A Philosophical Essay on Probabilities*
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BERGSON. *Time and Free Will*
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Chapter 62 OLIGARCHY

INTRODUCTION

IN the great books of political theory the word oligarchy is usually listed along with monarchy and democracy among the traditional names for the forms of government According to the meaning of their Greek roots oligarchy signifies the rule of the few as monarchy signifies the rule of one and democracy the rule of the people—or the many These verbal meanings are somewhat altered however when we consider the actual conflict between oligarchy and democracy in Greek political life It involved an opposition not simply between the few and the many but between the wealthy and the working classes The contest between these factions for political power dominated more than a century of Greek history around the Periclean age and that fact justifies Aristotle s remark that oligarchy and democracy are the two principal conflicting forms of government

We would not so describe the political struggle of our time We would not speak of oligarchy as one of the principal forms of government in the world today Instead we tend to think in terms of the conflict between democracy and dictatorship or despotism Even when we look to the background of present issues it is the age old struggle between absolute and constitutional government—or between monarchies and republics—which seems to supply the obvious historical parallels for the contemporary conflict between the principles of arbitrary and legal government The traditional terms of political theory with the exception of oligarchy thus appear to have a certain liveliness in the consideration of current problems But though it does not have such frequency in our speech or familiarity in our thought oligarchy may be much more relevant to the real issues of our day than appears on the surface

Certainly within the framework of constitutional government oligarchical and democratic principles are the opposed sources of policy and legislation In modern as in ancient republics the division of men into political parties tends to follow the lines of the division of men into economic factions The ancient meanings of oligarchy and democracy especially for those observers like Thucydides and Aristotle who see the rich and the poor as the major rivals for constitutional power indicate the fusion of political and economic issues

The difference between oligarchy and democracy says Aristotle is not well-defined by reference to the few and the many unless it is understood that the few are also the rich and the many the poor The issue is not whether the few are wiser than the many or whether it is more efficient to have the government in the hands of the few rather than the many Such issues have been debated in the history of political thought but they are more appropriate to the alternatives of aristocracy and democracy than to the conflict between oligarchy and democracy

The historic struggle between oligarchs and democrats—whether described as a struggle between rich and poor nobility and bourgeoisie landed gentry and agrarian peons owners and workers classes and masses—is a struggle over the political privileges of wealth the rights of property the protection of special interests In the tradition of the great books Marx and Engels may be the first to call this struggle the class war but they are only the most recent in a long line of political and economic writers to recognize that the economic antagonism of rich and poor generates the basic political conflict in any state Any city however small says Socrates is in fact divided into two one the city of the poor the other of the rich these are at war with one another

OLIGARCHY IS NOT always defined as the rule of the wealthy nor is it always conceived as the opponent of democracy on constitutional ques tions In the *Statesman* for example Plato first divides the forms of government into mon archy the rule of the few and the rule of the many and then divides the rule of the few in to aristocracy which has an auspicious name and oli archy Here aristocracy and oligarchy seem to be regarded as opposites the one a government in which the few rule according to the laws the other lawless government by the few In both the few are the wealthy hence wealth is no more characteristic of oligarchy than of aristocracy

Some political theorists make no reference to wealth at all in the discussion of oligarchy Hobbes divides the forms of government ac cording to whether the sovereign power is in the hands of one or more and if in the hands of more than one then whether it is held by some or all He calls the several forms of government monarchy (one) aristocracy (some) and de mocracy (all) There are other names of gov ernment in the histories and books of policy he adds such as *tyranny* and *ol garchy* But they are not the names of other forms of govern ment but of the same forms misliked For they that are discontented under *monarchy* call it *tyranny* and they that are displeased with *aris tocracy* call it *ol garchy* Like Hobbes both Locke and Rousseau use no criterion except numbers to distinguish the forms of govern ment Locke calling government by the few oligarchy and Rousseau calling it aristoc racy

Barely outlined in this way the alternatives of monarchy aristocracy *or* oligarchy and de mocracy seem to raise issues only of expediency or efficiency rather than of justice Whether oligarchy *is* intrinsically a good or bad form of government tends to become a question only when other factors are cons dered when for example the distinction betv een aristocracy and oligarchy is made to turn on whether the few are men of virtue or men of property or when in the comparison of oligarchy with de mocracy the emphasis is not upon numbers but on the principles of wealth and liberty

Nevertheless the numerical criterion does not seem to be totally irrelevant to the com parison Oligarchy and democracy Aristotle writes are not sufficiently distinguished mere ly by these two characteristics of wealth and freedom Though the real difference be tween democracy and oligarchy is poverty and wealth and though wherever men rule by reason of their wealth whether they be few or many that is an oligarchy Aristotle does not seem to think we can neglect the political sig nificance of what he calls the accidental fact that the rich everywhere are few and the poor numerous

With regard to aristocracy and oligarchy the chief question does not seem to be one of prin ciple but of fact Plato in the *Republic* and Aristotle in the *Politics* define aristocracy as gov ernment by the few best men or the most virtuous They also place it next to what is for them the ideal government by the supremely wise man—the rule of the philosopher king or what Aristotle calls the divine sort of govern ment In this context oligarchy represents a perversion of aristocracy as tyranny represents a corruption of monarchy

Plato describes oligarchy as arising when riches and rich men are honored in the State and when the law fixes a sum of money as the qualification for citizenship and allows no one whose property falls below the amount fixed to have any share in the government But according to Socrates wealth does not qualify men to rule as virtue and wisdom do Just think what would happen he says if pilots were to be chosen according to their property and a poor man were refused per mission to steer even though he were a better pilot To which Adeimantus agrees that in government as in navigation the probable re sult would be shipwreck.

But though there may be no question of the superiority of aristocracy over oligarchy in principle the critics of aristocracy question whether any h storic state in which the few hold political power is not in fact an oligarchy It may not always be the case that the power of the few rests directly on wealth The privileged class may be a military clique or an hered tary nobility Yet these distinctions are seldom un accompan ed by the control of la d or other forms of wealth so that indirectly t least the oligarchical factor is thought to be operative

The criticism of aristocracies as masked oligarchies is discussed in the chapter on Aristocracy The critical point seems to be that nothing except superior virtue or talent justifies a political inequality between the few and the many The meaning of oligarchy is generalized in consequence to include any government in which the special privileges or powers held by the few cannot be justified whether it is wealth or some other title to pre eminence that is substituted for superiority in virtue or talent When it is so understood the word oligarchical tends to become like tyrannical a term of reproach

In describing different forms of democracy Aristotle observes that their common principle is to give a share in the government to all who meet whatever minimum qualification is set by law The absolute exclusion of any class he says would be a step towards oligarchy To the same effect is Mill s comment on the steps away from oligarchy accomplished by English constitutional reforms in the 19th century

In times not long gone by Mill writes the higher and richer classes were in complete possession of the government A vote given in opposition to those influences was almost sure to be a good vote for it was a vote against the monster evil the over ruling influence of oligarchy But now that the higher classes are no longer masters of the country now that the franchise has been extended to the middle classes a diminished form of oligarchy still remains The electors themselves are becoming the oligarchy —in a population where many are still disfranchised 'The present electors Mill continues, and the bulk of those whom any probable Reform Bill would add to the number are the middle class and have as much a class interest distinct from the working classes as landlords or great manufacturers. Were the suffrage extended to all skilled laborers, even those would or might still have a class interest distinct from the unskilled

Oligarchy remains according to Mill so long as there is any unjustifiable discrimination among classes in the population It is not in his view limited to discrimination based on the extremes of wealth and poverty as he plainly indicates by his remarks on the special interests of different parts of the working class or their relation as a whole to the lower middle classes He makes this even plainer by what he has to say on political discrimination as between the sexes Suppose the suffrage to be extended to all men, he writes suppose that what was formerly called by the misapplied name of universal suffrage and now by the silly title of manhood suffrage became the law the voters would still have a class interest as distinguished from women

The oligarchical defect in representative government which Mill is here criticizing seems to have little or no basis in economic class divisions The exclusion of any class in the population from a voice in government renders that government oligarchical with respect to them The excluded class may even be a minority So conceived oligarchy no longer means the rule of either the rich or the few

When the meaning of oligarchy is generalized in this way the discussion of oligarchy seems to presuppose the typically modern conception of democracy As indicated in the chapter on Democracy the distinguishing feature of the modern democratic constitution is universal suffrage By this criterion the conflict between the democrats and the oligarchs of the ancient world appears to be a conflict between two forms of the oligarchical constitution—one in which the wealthier few and one in which the poorer many have political rights, but in neither of which membership in the political community includes all normal adult human beings in the population

Where ancient political theory could conceive of a mixed constitution—somehow combining oligarchical and democratic principles—the modern conception of democracy seems to make any compromise with oligarchy impossible Certain modern writers notably Mosca, Michels and Pareto seem to insist on the contrary that oligarchy is present in all forms of government and is especially prevalent in representative democracies where the actual conduct of government—the effective power—is in the hands of a bureaucracy or an elite whether popularly chosen or self-appointed But the contradiction may be more verbal than real if on one side the word oligarchy means some degree of restriction in the franchise or citizenship and on the other it applies to any situa

tion in which the whole people are not directly active in all the affairs of government and consequently a small number of men administers the state Understood in the latter sense the oligarchical principle does not seem to be incompatible with representative democracy Those who use the word in this sense merely call attention to an inevitable characteristic of representative government A representative democracy may also have an aristocratic aspect when it follows the principle that the men best qualified by virtue or talent for public office should be chosen by the suffrage of all their fellow citizens

Fuller discussion of thes aspects of oligarchy is found in the chapters on Aristocracy and Democracy Here we are primarily concerned with political issues which have their source in the opposition of economic classes in the state primarily that extreme division of men into those who live by their labor and those who live on their property and the labor of others It is in terms of this extreme division between men of leisure and working men that the conflict between oligarchy and democracy takes place in the ancient world

At a time when citizenship meant a much more active and frequent participation in government than it does under the modern institutions of the ballot box and the representative assembly the ancient defenders of oligarchy could argue that only men of wealth had the leisure requisite for citizenship Oligarchy could be further defended on the ground that in many of the Greek city states public officials were either not compensated at all or at least not substantially Only men of sizeable property could afford to hold public office

Aristotle weighs the arguments for and against oligarchy On the point of leisure for example he holds that nothing is more absolutely necessary than to provide that the highest class not only when in office but when out of office should have leisure Yet even if you must have regard to wealth in order to secure leisure it is surely a bad thing he thinks that the greatest offices such as thos of kings and generals should be bought The law which allows this abuse makes wealth of more account than virtue.

Aristotle seems to regard democratic and oligarchical claims as complementary half truths

Both parties to the argument he says are speaking of a limited and partial justice but imagine themselves to be speaking of absolute justice According to an adequate conception of political justice it is as unjust to treat equals unequally as it is to treat unequals equally The oligarch violates the first of these principles the democrat the second Democracy arises out of the notion that those who are equal in any respect are equal in all respects because men are equally free they claim to be absolutely equal Oligarchy is based on the notion that those who are unequal in one respect are in all respects unequal being unequal that is in property they suppose themselves to be unequal absolutely

Both forms of government have a kind of justice but tried by an absolute standard they are faulty and therefore both parties whenever their share in the government does not accord with their preconceived ideas stir up revolution In oligarchies the masses make revolution under the idea that they are unjustly treated because they are equals and have not an equal share and in democracies the notables revolt because they are not equal and yet have only an equal share

What can cure this situation in which perpetual revolution seems to be inevitable as democracy succeeds oligarchy or oligarchy democracy in the government of the Greek cities? Aristotle describes many forms of oligarchy and democracy but none seems to remove the cause of revolution When in an attempt to preserve their position the wealthier families turn to the more extreme forms of oligarchical constitution that tendency eventually leads to a kind of despotic government which Aristotle calls dynasty or the lawless rule of powerful families

To establish a stable government which shall be less subject to revolution in favor of a contrary principle of government and which shall resist the tendency toward lawless rule by either the masses or the powerful few Aristotle proposes the mixed constitution wh ch shall combine the elements of both democratic and oligarchical justice But this will not work in actual practice he th nks unless the middle class

is large and stronger if possible than both the other classes Great then is the good fortune of a state in which the citizens have a moderate and sufficient property for where some possess much and the others nothing there may arise an extreme democracy or a pure oligarchy or a tyranny may grow out of either extreme These considerations will help us to understand why most governments are either democratical or oligarchical The reason is that the middle class is seldom numerous in them and whichever party whether the rich or the common people transgresses the mean and predominates draws the constitution its own way and thus arises either oligarchy or democracy

From the point of view which sees no justice in granting any special privileges to property Aristotle s position on oligarchy seems open to question For one thing in admitting a partial justice in the principle that those who are unequal in wealth should be treated unequally in the distribution of political power Aristotle appears to affirm that the possessors of wealth *deserve* a special political status For another thing in his own formulation of an ideal polity Aristotle advocates the exclusion of the working classes from citizenship The citizens must not lead the life of mechanics or tradesmen for such a life is ignoble and inimical to virtue Neither must they be husbandmen since leisure is necessary both for the development of virtue and the performance of political duties. All these classes of men are necessary for the existence of the state but they are to be no part of it in the sense of political membership "The best form of state will not admit them to citizenship though it will include as necessary the slaves who minister to the wants of individuals or mechanics and laborers who are the servants of the community

Some of the great speeches in Thucydides *History* which deal with domestic issues as well as the issues of war and peace eloquently argue the opposite side of the case Debating with Hermocrates before the Syracusan assembly Athenagoras answers those who say that democracy is neither wise nor equitable but that the holders of property are the best fitted to rule I say on the contrary first that the word *demos* or people includes the whole state oligarchy only a part next that if the best guardians of property are the rich and the best counsellors the wise none can hear and decide so well as the many and that all these talents severally and collectively have their just place in a democracy But an oligarchy gives the many their share of the danger and not content with the largest part takes and keeps the whole of the profit

In modern political thought the discussion of oligarchy seems to occur on two levels There is a controversy on the level of constitutional principles with regard to suffrage and representation and the qualifications for public office Here the issues concern the justice of the fundamental laws of republican or popular government There is also a consideration of the way in which men of property or corporate concentrations of wealth are able to exert influence upon the actual course of government Here the problem becomes, not so much the justice of the constitution or of the laws, but the weight which wealth seems able to throw onto the scales of justice.

The great modern defense of the oligarchical constitution does not seem to be as plainly or forcefully made in any of the great books as in the speeches of Edmund Burke especially those in opposition to the suffrage reform measures proposed by Charles James Fox, wherein Burke argues for the principle of *virtual* representation. It is unnecessary he claims for the franchise to be extended to the working classes if their economic betters—who also happen to be their superiors in talent and education—deliberate on what is for the common good of all

The Federalists seem to take an opposite view Reflecting on the system of British representation in their day they observe that for the eight millions of people in the kingdoms of England and Scotland the representatives in the House of Commons amount to five hundred and fifty-eight But they go on, of this number one ninth are elected by three hundred and sixty four persons and one half by five thousand seven hundred and twenty three persons It cannot be supposed they argue, that the half thus elected and who do not even reside among the people at large can add any thing either to the security of the people

against the government or to the knowledge of their circumstances and interests in the legislative councils On the contrary it is notorious that they are more frequently the representatives and *instruments of the executive magistrate* than the guardians and advocates of the popular rights Nevertheless they do not condemn such an oligarchical system of representation as entirely inimical to the virtues of parliamentary government It is very certain they declare not only that a valuable portion of freedom has been *preserved under* all these circumstances but that the defects in the British code are chargeable in a very small proportion on the ignorance of the legislature concerning the circumstances of the people

Some of the American constitutionalists may be influenced by Burke s *defense* of oligarchy in terms of the virtues of an aristocracy but they state their own position in terms which are more plainly oligarchical They argue for poll tax clauses and property qualifications for public office on the ground that the country should be run by the people who own it Furthermore those who are not economically independent are not in a position to exercise political liberty Power over a man s subsistence Hamilton declares amounts to power over his will

Facing the issue which had been raised on the floor of the constitutional convention Madison remarks that the most common and durable source of factions has been the various and unequal distribution of property Those who hold and those who are without property have ever formed distinct interests *in society* He proposes a representative—or what he calls a republican —system of government to avoid the excessive factionalism of the pure or direct democracies of Greek city states

Theoretic politicians who have patronized this species of government Madison writes have erroneously supposed that by reducing mankind to perfect equality in their political rights they would at the same time be perfectly equalized and *assimilated in their possessions* their opinions and their passions By a weighted system of representation the power of sheer numbers may be counter balanced by the power given to other factors thus preventing the accomplishment of the secret wishes of an unjust and interested majority

A rage for paper money for an abolition of debts for an equal division of property or for any other improper or wicked project will be less apt to pervade the whole body of the Union *than a particular member of it*

In another paper the Federalists answer the charge that the constitution is oligarchical because the House of Representatives will be taken from that class of citizens which will have least sympathy with the mass of the people *and be most likely to aim at an ambitious sacrifice* of the many to the aggrandizement of the few This objection they say while leveled against a pretended oligarchy in principle strikes at the very root of republican government

The method of election provided for by the Constitution aims to obtain for rulers men who possess most wisdom to discern and most virtue to pursue the common good of the society Who are to be the electors of the federal representatives? Not the rich more than the poor not the learned more than the ignorant not the haughty heirs of distinguished names more than the humble sons of obscurity and unpropitious fortune Who are to be the objects of popular choice? Every citizen whose merit may recommend him to the esteem and confidence of the country No qualification of wealth of birth of religious faith or of civil profession is permitted to fetter the judgment or disappoint the inclination of the people

WHETHER THE AMERICAN Constitution in its original formulation is an oligarchical document has long been a matter of dispute Whether the Federalists favor devices for protecting the rights of property or repudiate oligarchical *restrictions in favor of the rights of man* has also been the subject of controversy That this is so may indicate at least a certain ambiguity in their position But on the question of the oligarchical influences on government—the political pressures exerted by *propertied* classes to serve their special interests—the opinion of the modern authors of the great books seems much clearer

The most extreme statement of this opinion is *of course to be found in the Communist Manifesto* There government in fact the state

self is regarded as an instrument which the economic oppressors wield against the oppressed The final step in the bourgeois revolution according to Marx and Engels occurred when the bourgeoisie conquered for itself in the modern representative State exclusive political sway In the bourgeois state legislation is nothing but the will of this one class made into a law for all One aim of the communist revolution beyond the temporary dictatorship of the proletariat is the withering away of that historic formation of the state in which political power is merely the organized power of one class for oppressing another

Though much less radical in intention than Marx Smith and Mill make statements which seem to be no less radical in their criticism of the oligarchical influences on modern parliamentary government It has been said Smith observes that we rarely hear of combinations of masters though frequently of those of workmen But whoever imagines upon this account that masters rarely combine is as ignorant of the world as of the subject Masters are always and everywhere in a sort of tacit but constant and uniform combination not to raise the wages of labor above their actual rate Masters too sometimes enter into particular combinations to sink the wages of labor even below this rate Furthermore the parties to the conflict do not have equal access to legislative protection Whenever the legislature attempts to regulate the differences between masters and their workmen its counsellors are always the masters

Almost a century later Mill writes in a similar vein concerning the persevering attempts so long made to keep down wages by law Does Parliament he asks ever for an instant look at any question with the eyes of a working man? On the question of strikes for instance it is doubtful if there is so much as one among the leading members of either House who is not firmly convinced that the reason of the matter is unqualifiedly on the side of the masters and that the men s view of it is simply absurd The remedy for this inequity according to Mill is not communism but constitutional reforms in the direction of universal suffrage which will no longer leave the working classes excluded from all direct participation in the government

OUTLINE OF TOPICS

REFERENCES

To find the passa es cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in 4 Ho ier *Iliad* BK II [265 283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the pas sage is in sect on d of page 12

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lower h lves of the page For example in 53 JAM s *Psychology* 116a 119b the passage begins in the upper half of page 116 and e ds in the lower half of page 119 When the text is p inted in tv o columns the letters a and b refer to the upper nd lowe halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the page Fo exampl in 7 PLATO *Symposium* 163b 164c the passage beg ns in the lower h lf of th l ft hand side of page 163 and end in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One or mo e of the ma n divis ons of a work (such as PART BK CH SE) are sometimes incl d d in the reference line numbers in brackets are g ven in cer tain cases *e g* *Iliad* BK II [265 283] 12d.

BIBLE REFERENC S The references are to book chapter and verse When the King James and Douay vers ons differ in title of books or in th numbering of chapters or verses the King James ers n is cited first and the Douay indicated by a (*D*) follows *e g* OLD T STA MENT *Nehemiah* 7 45—(*D*) *II Esd as* 7 46

SYMBO S The abbreviat on sp calls the reader s attention to one or more especially relevant parts of a whole referen e passim s gnifies th t the top c is d scussed interm t tently rather than continuously in the v ork or passage cited

For additional information concerning th style of the references see the Explanation of Refer nce Style for gene al gu dance in the use of *The G eat Id as* con lt the Preface

1 The oligarchical constitution the principles and types of olig chy

6 H R OTUS *H t ry* BK II 107d 108b

6 THUCYDIDES *P loponnes n W r* K I 353d BK V 502d 503d 504b K VI 579d 581c

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43 FEDERALIST NU B ER 57 176d 179b NUMBER 58 181b-c NUMBER 60 185a 187a passim NUMBER 63 194b 195b NU B ER 77 228d 229a

43 MILL *Representat ve Government* 363b 364d 393c 395a

46 HEGEL *Philos phy of H sto y* PART I 277c d PART III 292d 293b

3 The instab lity of oligarchical government

3a The re olutionary changes to which oli garchy is subject the change to despot ism or democracy

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6 TH CYDID S *P loponne ian W a* BK III 436d-438b BK VIII 568d 569a 569 585a esp 582a-c 587 590c

7 PL TO *Republic* BK VIII 408b-409a / *Laws* K I 680a b / *Seventh Letter* 801c

9 ARISTOTL *Polu cs* BK II CH 12 [1273b36-12 4a22] 470c d BK III CH 15 [1286b9-21] 484d-485 BK IV CH 5 [1292b11 2] 492a CH I [1295b35 1296 21] 496a b BK CH I 502a 503b pas im, esp [13 S 16] 503b CH 3 [302b25 28] 504a [1303b4 7] 505a CH 6 507b-508c CH 12 [1316 1 28] 518d 519d / *Athen s Constitut n* CH 2-6 553a 555c C I 3 41 568a 572a

14 PLUTARCH *S lon* 68d 71c 75c 76d / *The m st cles* 96b c / *Cam l us* 117c 121 c / *Cori la us* 176b 184c / *Cra sus* 444d-445d / *Pompey* 521c d / *Caesa* 581d 582a / *Ph c on* 604b d 619d / *Agis* 648b d 656d / *Cleomenes* 657a 663c / *T ber us C cchu* 674c 681a c / *Ca s C cch s* 681b d 689a c / *Cicero* 708a b

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50 MARX *Capital* 377c 378d

50 M RX ENGELS *Communist Man festo* 421c 425b esp 423d-424b 425b 429b c

3b The preservation of oligarchies against revolution

6 HERODOTUS *H story* BK VI 202c 203b

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4 The defense of ol garchy the political r ghts and pri ileges of property

6 HERODOTUS *History* BK III 107d 108a

6 TI UCYDID *Peloponnesian War* BK VI I 575d 576b 590a b

7 PLATO *Laws* BK V 695a-c BK VI 699d 700b / *Seventh Letter* 807a b

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ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

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Chapter 63 ONE AND MANY

INTRODUCTION

IN *Pragmatism* and in his unfinished last work *Some Problems of Philosophy* William James uses the problem of the one and the many as one of the crucial tests of the philosophical mind In his famous table of doctrines or isms he aligns monism with rationalism and idealism in the column headed tender minded and in the other column headed tough minded he places their opposites—pluralism empiricism and materialism But as his own theories show isms like monism and pluralism tend to over simplify the issues

Whoever emphasizes the oneness of the world for example may also acknowledge its many ness and recognize that it is somehow a pluri verse as well as a universe Some like Bradley may qualify this view by regarding the unity as ultimate reality the plurality as appearance or illusion Whoever finds the multiplicity of things the primary fact may nevertheless find some unity in the order and connection of things Some like James himself may insist that the connection is a loose concatenation of relatively independent parts of reality rather than an in terpenetration of each part with every other in the solid whole which James calls the block universe

There may be another oversimplification in James con i l ration of the problem of the one and the many He seems to be concerned largely if not exclusively with the alternatives of the block and the concatenated universe as con ceptions of the structure of reality But as some of the great books of antiquity make evi dent that is only one of the problems of the one and the many Perhaps it should be said not that there are many problems of the one and the many but that there is one problem having many aspects or applications for in every state ment of the problem there is at least this single ness of theme that the one and the many are opposed that the one is *not* a many and the many *not* a one Yet even that does not seem to be quite accurate for as Socrates tells Protar chus in the *Philebus* it may also be said that the one is a many and the many a one These are wonderful propositions he says wonderful because whoever affirms either is very open to attack

At this early moment in the recorded tradi tion of western thought the dialogues of Plato so thorough in their exploration of the problems of the one and many make no claim to having discovered or invented them They were ancient even then They seem to hang in the very atmosphere of thought usually befogging those who try to see the truth about anything else without first clearing away their obscurities.

Socrates refers to the common and acknowl edged paradoxes of the one and the many that everybody has by this time agreed to dis miss as childish and obvious and detrimental to the true course of thought These aside some genuine perplexities remain Protarchus asks Socrates to instruct him about those other marvels connected with this subject which as Socrates seems to have implied have not yet become common and acknowledged

Socrates begins by calling his attention not to the unity of *this* man or *this* ox but to the sense in which it is said that man is one or ox is one or beauty one or the good one It is necessary to ask he says first whether such unities exist then such unities being always the same and admitting neither generation nor destruction how each is itself alone is not only one but *this* one finally how these unities can be conceived as dispersed and multiplied in the world of things which come to be and pass away This last question seems to be the most difficult because it asks about the *being* of the same and one as it *becomes* in the one and many

Protarchus is impatient to begin clearing up these problems Willing to undertake what he calls this great and multifarious battle in which such various points are at issue Socrates is also anxious to let Protarchus and the other youths know the intellectual perils which lie ahead for novices who enter upon this inquiry The one and many he tells them become identified by thought They run about together in and out of every word which is uttered This union of them will never cease and is not now beginning but is an everlasting quality of thought itself which never grows old

That is why he explains any young man when he first tastes these subtleties is delighted and fancies that he has found a treasure of wisdom in the first enthusiasm of his joy he leaves no stone, or rather no thought unturned now rolling up the many into the one and kneading them together now unfolding and dividing them he puzzles himself first and above all and then he proceeds to puzzle his neighbors whether they are older or younger or of his own age—that makes no difference neither father nor mother does he spare no human being who has ears is safe from him hardly even his dog and a barbarian would have no chance of escaping him if an interpreter could only be found

WHETHER IT is full of exasperating subtleties or is a treasure of true wisdom the discussion of the one and the many—in itself and in relation to being and becoming the intelligible and the sensible the definite and the infinite the same and other universals and particulars wholes and parts the simple and the complex the indivisible and the continuous—is a discussion which seems unavoidable to the ancients In the dialogues of Plato and in Aristotle s treatises especially his *Metaphysics* the one and the many are connected with the basic terms of philosophical thought

For Plato the distinction between the one and the many enters into the analysis of almost any object—such as pleasure or virtue or knowledge Anything viewed under the aspect of its being or its becoming its definite sameness or its infinite otherness and variety must be discussed both as a one and as a many The motion of Plato s dialectic may be from the one to the many or from the many to the one or it may be on the level of the many as an intermediate stage through which analysis must go in proceeding from the infinite to the one Those who pass at once from unity to infinity says Socrates do not recognize the difference between the mere art of disputation and true dialectic

For Aristotle first philosophy or metaphysics concerned as it is with being *qua* being and the attributes which belong to anything *qua* being also investigates unity Unity is the first property of being The meanings of one or unity are as various as the meanings of to be If there is a difference between essential and accidental being there is a parallel difference between essential and accidental unity If natural and artificial things differ in substance or being so too must they differ in unity Being and unity are the same Aristotle says and are one thing in the sense that they are implied in one another as are principle and cause Unity is nothing apart from being and nothing can be without being one in some sense of unity which is determined by the way in which the thing exists Aristotle s analysis of any subject matter proceeding as it does by reference to contraries always appeals to the one and the many All contraries he says are reducible to being and non being and to unity and plurality as for instance rest belongs to unity and movement to plurality And everything else is evidently reducible to unity and plurality For all things are either contraries or composed of contraries and unity and plurality are the principles of all contrariety

THE PROBLEMS IN whose analysis one and many seem to be involved recur in every period of western thought The question for example whether there is an irreducible duality in the relation of knower and known or whether in the act of knowledge knower and known are one is discussed by Hobbes and William James as well as Plotinus and Aristotle The question whether the state—which is a multitude somehow united for a common life—has or should have the same degree of unity as the family is discussed by Locke and Hegel as well as Plato and Aristotle

The earlier controversy over the indivisibility of sovereignty becomes at a later stage the central issue of federal union to which *e pluribus unum* is the solution offered by the Federalists Question concerning the simple and the complex or wholes and parts as objects of knowledge or questions concerning the unity and divisibility of time space or matter engage the attention of inquirers and analysts no less in modern than in ancient times

But there are certain problems which are treated with unusual speculative vigor by the ancients alone Unlike the problems just mentioned which deal with applications of the contrast between unity and multiplicity these are questions about the One itself—what it is whether it exists whether it is identical with Being whether it is itself a substance or the substance of all things

The sustained inquiry into such matters in antiquity seems to testify to the extraordinary power exerted upon ancient thought by Parmenides of Elea The person called the Eleatic Stranger represents his theories in such dialogues of Plato as the *Sophist* and the *Statesman* Parmenides or his disciple Zeno is probably the source of many of the paradoxes and riddles which Socrates in the *Philebus* dismisses as no longer worthy of serious attention One whole dialogue named *Parmenides* because of his part in the discussion exhibits the Eleatic demonstration that all is one It abounds in the subtleties of the various arguments which try to defend the reality of the many or try to reduce that position to absurdity

Questioned by Socrates concerning his paradoxes Zeno says that his writings were meant to protect the arguments of Parmenides against those who make fun of him and seek to show the many ridiculous and contradictory results which they suppose to follow from the affirmation of the one When he addresses himself to the partisans of the many Zeno says that he returns their attack with interest by retorting upon them that their hypothesis of the being of many if carried out appears to be still more ridiculous than the hypothesis of the being of one

Aristotle also deals with the Eleatic arguments. In the *Physics* he says first that inquiring about whether being is one cannot contribute to the study of nature He then adds that such inquiry anyway would be like arguing against any other position maintained for the sake of argument or like refuting a merely contentious argument This description he says applies to the arguments both of Melissus and Parmenides their premises are false and their conclusions do not follow Accept one ridiculous proposition and the rest follows—a simple enough proceeding Aristotle's treatment of Parmenides and Zeno in the *Metaphysics* seems to be no more sympathetic though it tacitly admits the relevance of the Eleatic speculation to the study of being if not to the study of change and the principles of nature Nevertheless many of the questions concerning the one and the many which both Plato and Aristotle deem worthy of discussion appear to have some connection with the perplexities propounded by Parmenides and his school

Those who do not deny either the unity of being or its multiplicity tend to make the primary fact about reality either its oneness or its manyness This may seem at first to be of slight significance but if the two views of the world which result from this difference are examined it may be found that the disagreement on this single point changes the perspective on everything else The philosophers who magnify either the one or the many behold universes more radically dissimilar than the same object looked at from opposite ends of a telescope But that is not all Almost every other fundamental conception—of God and man of the mind and knowledge of matter and motion of cause and necessity—seems also to be altered

Spinoza for example criticizes those who attribute to finite things of which there are necessarily many the properties which belong to the infinite being of which there can be only one This man this stone or any comparable individual thing is not a substance having the power to exist in and of itself it consists merely of certain modifications of the attributes of God the one infinite substance in which everything else both is and is conceived According to Spinoza those who suppose that the finite many are substances have not observed a proper order of philosophic study

They begin with the objects of sense which have the least reality and come last to the dr

vine nature the infinite one which ought to be studied first because it is first in the order of knowledge and in the order of things Hence it has come to pass Spinoza continues that there was nothing of which men thought less than the divine nature while they have been studying natural objects and when they afterwards applied themselves to think about God there was nothing of which they could think less than those prior fictions upon which they had built their knowledge of natural things for these fictions could in no way help to the knowledge of the divine nature

Starting with the definition of substance as that which exists in itself and is conceived through itself and with the definition of God as absolutely infinite being that is to say substance consisting of infinite attributes Spinoza undertakes to prove that there cannot be two or more substances having the same nature or attributes that substance is necessarily infinite and hence that it is impossible for more than one substance to exist Since he regards it as axiomatic that everything which is is either in itself or in another it follows for Spinoza that if anything at all exists God (or substance) must necessarily exist—as that which alone exists in itself and as that in which every thing else has its finite being as a mode or affection of the attributes of God

Certain other consequences seem to follow Th one infinite substance is indivisible it is not a whole made up of parts which can have independent existence as the parts of a quantitative whole seem able to exist when the quantity is divided Furthermore God according to Spinoza is the immanent and not the transitive cause of all things God causes them not as one thing acting on another when both are independent in existence but rather as the being *in which* all things are God is not present in the world as other theologians seem to think in the manner in which a cause exists in an effec that depends upon it Rather the whole world is in God as an effect which can in no way be separated from the existence of the cause any more than an aspect can be separated from that of which it is an aspect

For Spinoza the unity and totality of being can be called nature as well as infinite substance or God His distinction between *natura naturans* and *natura naturata* discussed in the chapter on NATURE seems to permit him to distinguish between the infinite or eternal and the finite or temporal—the one and the many—without implying a real separation between God and the world Since God is immanent in the world and since God not only exists necessarily but also acts from the necessity of His own nature it follows (as is indicated in the chapter on NECESSITY AND CONTINGENCY) that every finite and temporal aspect of nature is necessarily determined Nothing is contingent Nothing could be otherwise than it is

THIS EXAMINATION of a doctrine in which the primacy of the one absorbs as well as subordinates the many serves to exemplify the point that making the one primary is more than a matter of emphasis It also shows that almost every fundamental question is affected It presents a picture of what William James appears to mean when he speaks of the block universe though he himself usually seems to have in mind Hegel s Absolute rather than Spinoza s God

Aristotle advances a contrary doctrine Like Spinoza he uses the term substance Like Spinoza he defines substance as that which exists in itself not as an accident (a quality for example) which exists in another *e g* the redness in the rose But for him substance is not necessarily infinite, nor is it indivisible A rose or a man is a substance Every physical thing which has a natural unity is a substance

Each is a finite whole or rather each is a whole in a number of different senses Insofar as it has essential unity it is a whole composed of matter and form which according to Aristotle are represented in the formulation of a definition by the genus and the differentia Insofar as it is composed of matter it also has the unity of a quantitative whole in virtue of which it moves as one thing or uniquely occupies a place Since quantitative unity involves continuity and continuity entails divisibility a substance remains one only so long as it is not divided into its quantitative parts just as it remains one essentially only so long as its matter and form are not separated

A substance is individual not because it is absolutely indivisible—as for Lucretius the atom

is because it is simple rather than composite Its individuality rather consists first in its being divided from other substances in such a way that it can perish without necessarily destroying them or they can perish without destroying it and second in the fact that though divisible into parts it is one whole when these parts remain undivided Yet as one substance it has more unity than a mere collection of things

The difference between a man and a machine according to Aristotle s differentiation between the unity of natural substances and of artificial things is that a man is not composed of substances (though the parts of a living organism may come to exist as substances when it is decomposed or they are separated from it) whereas a machine made up of separate pieces of metal is nothing but a number of individual substances arranged in a certain way The unity of man does not appear to be the same therefore when soul and body are conceived by Descartes as two substances and by Aristotle not as distinct substances but as form and matter which through their union constitute a single substance

Unity in short belongs essentially to the individual natural substance Because each individual substance is necessarily a one among a many Aristotle unlike Spinoza cannot affirm the unity of substance without also affirming a plurality of substances Not itself a substance but only an aggregation of substances the world is primarily a many rather than a one The unity it possesses derives from the order and connection of the substances which are its component parts and that in turn largely derives from the way in which distinct substances causally interact

Since according to Aristotle causality includes contingency and chance the causal interdependence of substances with respect to their generation and their motions does not lock them together into a solid block To use James imagery again a vast plurality of individual substances causally yet also contingently related constitutes a loosely knit world a concatenated universe

THE RELATION OF the world as a whole to God does give it greater unity if the supposition of a plurality of finite individual substances remains the fundamental feature of the world God creates The Christian doctrine of creation may attribute to the world a greater unity than that possessed by any work of human art in proportion as the infinitely greater wisdom of the divine plan orders the separate things of nature with an infinitely greater perfection than man can achieve in putting things together or in ordering them to his purpose But if according to the theologian God in creating the world creates not one substance but many substances forming a single whole through the pattern of their connection with one another then in a sense the world has less unity than each of its component substances

For Aquinas one kind of substance may have greater unity than another The immaterial has more than the material and God more than any finite substance since each of these is composed of matter and form or essence and accidents or at least of essence and existence whereas the infinite being of God is absolutely simple The divine nature is without matter without accidents its attributes are identical with its essence and its essence with its existence

This cardinal point about the divine nature is crucial to the conception of God and of the world s relation to God In the formation of Christian theology God s absolute simplicity seems to exclude all but one resolution of the issue concerning the Trinity According to the position Augustine takes in criticizing the Arian heresy the position which is expressed in the Nicene Creed God is not a trinity of substances but a trinity of persons—aspects of or relations within one substance The plurality of things which constitutes the world puts the world entirely outside the divine substance Immanent only as a cause the simple being of God transcends the complex whole of the created world

This transcendence seems furthermore to imply for theologians like Augustine and Aquinas a fundamental duality in the realm of existence God and the world are two not one Infinite being is absolutely prior to and independent of finite beings The one can exist without the many Though the many are said to participate in being when they do exist they do not enter into the being of the one or share it in any way

The being they have is not only separate from the being of God but even their mode of being is only analogical to the divine being

The doctrine that each thing has its own bein and that as Aquinas says being is com mon to all things only in an analogical sense seems to put diversity above unity in the struc ture of reality and to leave the ultimate plu rality of this world unaffected either by the fact that it was created as one or by the fact of its relation to a transcendent One

IN THE TRADITION of the great books the prob lem of the one and the many is often stated without using the notion of substance as the pivotal term

It appears in Plato s consideration of being and becoming It is sometimes present in his treatment of the relation between intelligible forms and sensible things—between the uni versal ideas and the particulars which resemble them through some manner of imitation or participation It even runs through the discus sion of the realm of ideas itself for the idea of the one is one idea among many and yet each of the many ideas is in some way one

The problem of the one and the many appears in Hume s consideration of the absolute dis tinctness of each unit of experience from every other accompanied as it is by his skepticism concerning our ability to discover any connec tions which might tie these units together into a real unity It appears in Kant s theory of the transcendental unity of apperception which reduces the sensory manifold to a unity of or der and in Hegel s theory of the one Absolute Idea which contains within itself all the variety that becomes manifest as the Idea unfolds in the processes of nature or history

The substitution of one set of terms for anoth r does not seem to alter the fundam ntal issue Nor does it enable the m nd to escape taking sides w th those who give primacy to the One or to the many except perhaps by trying to balance them as correlat ves Among the great books however the *Enneads* of Plotinus develops a theory of the One wh ch putting it above being and beyond kno ving seems to transfigure all the tradit onal terms of analy is

The One of Parmenides is after all Being and thus identification of Being with One raises a question of the reality of the many But ac cording to Plotinus there exists a Principle which transcends Being this is The One whose nature we have sought to establish so far as such matters lend themselves to proof Upon The One follows immediately the Principle which is at once Being and the Intellectual Principle Third comes the Principle Soul These are what Plotinus calls the three hypotases He finds some analogy for his trinity in a doctrine he ascribes to Plato s *Parmenides* in which he finds a threefold distinction between the Primal One a strictly pure Unity and a sec ondary One which is a One Many and a third which is a One and Many

The One according to Plotinus not only transcends being it also transcends intelligence Knowing or thinking requires an object The relation of knower and known entails a duality which would fracture the utter simplicity of The One Even the complete reflexivity of The One knowing only itself is excluded The super essential is for Plotinus also the supra cogitative

What stands above Being stands above intel lection he says it is no weakness in it not to know itself since as pure unity it contains noth ing which it needs to explore Multiplicity be g ns with the effort of the Intellectual Princ ple to know the Transcendent It knows the Transcendent in its very essence but with all its efforts to grasp that prior as pure unity it goes forth amassing successive impressions so that to it the object becomes multiple The Intell ctual Principle is established in multi plicity

What is the All of which The One is not all since the Intellectual Principle and the Soul also belong to it? Plotinus answers that The One is all things and no one of them The source of all things is not all things It is precisely because there is nothing within the One that all things are from it Everything else in the totality of which the Transcendent is the source emanates from it

Seeking nothing possessing nothing lack ing nothing Plotinus declares The One is perfect and in our metaphor has overflowed and its exuberance has produced the new this product has turned again to its begetter and has filled and has become its contemplator and so an Intellectual Principle It is simulta

neously Intellectual Principle and Being and attaining resemblance in virtue of this vision it repeats the act of the One in pouring forth a vast power This second outflow is a Form or Idea representing the Divine Intellect as the Divine Intellect represented its own prior The One This active power sprung from essences (from the Intellectual Principle considered as Being) is Soul Soul arises as the idea and act of the motionless Intellectual Principle It takes fullness by looking toward its source but it generates its image by adopting another a downward movement This image of Soul is Sense and Nature the vegetal principle

Nothing writes Plotinus is completely severed from its prior Thus the human Soul appears to reach as far down as to the vegetal order In these successive emanations all that is not One is conserved by virtue of the One and from the One derives its characteristic nature Everything except the One is a one many If it had not attained such unity as is consistent with being made up of multiplicity we could not affirm its existence The Transcendent alone is a really existent One wholly and truly One while its sequent poured down in some way from the One is all a total which has participation in unity and whose every member is similarly all and one

If reason cannot fully grasp the Transcendent One that may be because discursive reason is itself a thing of multiplicity The unity of an all-embracing vision may be required to apprehend the ineffable unity of the Transcendent. But the mysteriousness of unity is not confined to the Transcendent One It confronts the mathematician as well as the philosopher It challenges Nicomachus and Euclid as well as Plotinus

Unity writes Nicomachus occupying the place and character of a point will be the beginning of intervals and numbers but is not itself an interval or a number What then is unity or a unit in itself? Euclid answers with this definition A unit is that by virtue of which each of the things that exist is called one Unity is not only the measure of existence but also of numbers for according to Euclid a number is a multitude composed of units In mathematics no less than in metaphysics or in theolo y the relation of unity to number seems to be the heart of the problem of the one and the many

Number according to Locke applies itself to men angels actions thoughts everything that either does exist or can be imagined Unity or *one* is in his view not only the simplest of all our ideas but the most omnipresent Every object our senses are employed about every idea in our understandings every thought of our minds brings this idea along with it And therefore it is in its agreement to all other things *the most universal idea we have*

OUTLINE OF TOPICS

1 The transcendental one the Absolute the unity of being of nature of the universe

1a The relation of the one and the many emanation of the many from the one

1b The unity or duality of God and the world the immanence and transcendence of God

1c The one and the many in relation to the universal and the particular the abstract and the concrete universal

2 The modes of unity comparison of numerical essential and divine unity

2a Numerical unity or identity the number *one*

2b The unity of the indivisible or the simple the individual thing the point the atom the quality

2c The complex unity of a whole composed of parts the distinction between the indivisible and the undivided

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passage referred to For example in 4 HOMER *Iliad* BK II [6 283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the passage is in section d of page 12

PAGE SECTION When the text is printed in one column the letters a and b refer to the upper and lower halves of the page For example in 53 JAMES *Psychology* 116a 119b the passage begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the page For example in 7 PLATO *Symposium* 163b 164c the passage begins in the lower half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR'S DIVISIONS One or more of the main divisions of a work (such as PART BK CH SECT) are sometimes included in the reference line numbers in brackets are given in certain cases e g *Iliad* BK I [265 283] 12d

BIBLE REFERENCES The references are to book chapter and verse When the King James and Douay versions differ in title of books or in the numbering of chapters or verses the King James version is cited first and the Douay indicated by a (D) follows e g OLD TESTAMENT *Nehemiah* 7 45—(D) *II Esdras* 7 46

SYMBOLS The abbreviation esp calls the reader's attention to one or more especially relevant parts of a whole reference passim signifies that the topic is discussed intermittently rather than continuously in the work or passage cited

For additional information concerning the style of the references see the Explanation of Reference Style for general guidance in the use of *The Great Ideas* consult the Preface

1 The transcendental one the Absolute the unity of being of nature of the universe

7 PLATO *Parmenides* 491d 511d / *Theaetetus* 532c 533a / *Sophist* 566a 567a

8 ARISTOTLE *Topics* BK V CH I [12 14 19] 169 [121b4 8] 169c CH 6 [127 26-4] 176d 177a / *Sophistical Refutations* CH 7 [169 21 24] 232d [169 33 36] 233a CH 10 [170 18 25] 235a / *Physics* BK I CH 2 3 259b 262a CH 8 [191 23 b13] 267a c BK III CH 6 [207a7] 285b-d / *Heavens* BK I CH 8-9 367b 370d / *Generation and Corruption* BK I CH I 409 410c CH 8 [325 4 b5] 423c-424a / *Metaphysics* BK I CH 3 [983b7-984b8] 501d 502c CH 5 [986b8-987a2] 504c 505 CH 6 505b 506b CH 7 [988 34 b5] 506c CH 8 [988 23 989 8] 506d 507b BK II CH I [996 4-9] 514c CH 3 [998b14 28] 517b CH 4 [10 1 4 b25] 519d 520c BK V CH 12 [1003b23 1005 1] 522d 524a CH 4 [1 07 19- 008 3] 527a b BK CH 4 [1014b2, 35] 535a b BK II CH 4 [1 3 - 14] 553b [1 3 26 b2] 5 9d 560b CH 16 [1040b16-27] 564d BK VIII CH 6 [1 45 36-b] 570b c BK X CH 2 580b d BK XI CH 2 [1060a36-b19] 588c d BK XII CH I [10 , 18 22] 598a CH 4 [1 a31 8] 599d 600 CH 8 [10 4 31 39] 604d CH 10 [1075 12 24] 605d 606a BK XIV CH I [1087b34 1088 4] 620a b / *Soul* BK II CH I [412b6-9] 642c

12 LUCRETIUS *Nature of Things* BK II [10 3 1104] 28 29a

12 EPICTETUS *Discourses* BK I CH 14 120d 121c

12 AURELIUS *Meditations* BK II SECT 3 257a b BK IV SECT 29 266a SECT 40 267a b BK V SECT 8 269d 270b SECT 30 273a BK SECT 36-45 277c 278c BK VII SECT 9 280b c SECT 19 281a BK IX SECT 8-9 292b d BK X SECT 6-7 297a c BK XII SECT 30 310a b

13 VIRGIL *Aeneid* BK VI [724 729] 230b

17 PLOTINUS *Second Ennead* TR III CH 13 46c 47b TR IX CH I 65d 66a / *Third Ennead* TR VIII 129a 136a TR IX CH 3 138a c / *Fifth Ennead* TR I CH 6-7 211a 212c TR II CH I 214c 215a TR III CH II 17 222b-226c TR V CH 4 13 230b 235b TR VI CH 2-6 235d 23 d / *Sixth Ennead* TR II CH 9 12 272d 276a TR IV CH 7 8 300b 301c CH II 302c d TR V 305c 310d TR IX 353d 360d passim

19 AQUINAS *Summa Theologica* PART I Q 6 A 3 REP I 29c 30b Q II 46d 50b passim esp A I 46d-47d Q 30 A 3 169b 170c Q 3 A 8 210a 213a Q 44 ANS 238b 239a Q 4 A 3 258c 259a Q 93 A 9 ANS 500c 501c Q A 3 ANS 530a c PART I II Q 10 A I REP 3 662d 663d Q 37 A 4 ANS 688d 689c

20 AQUINAS *Summa Theologica* PART III Q 4 I R P 4 730d 731d Q 17 A ANS 808d 809d Q 19 A I REP 4 816a 818b
23 H BBES *Let athan* PART III 172b PART IV 269d
31 S I OZA *Ethics* PART I 355 372d esp PROP 2-8 355d 357d PROP 10 SCHOL 358a b PROP 12 359b c PROP 13 COROL and SCHOL 359d P O 14 COROL I 360a PROP 15 360a 361d ROP 16 COROL I 3 362 PROP 18 363c PROP 5 C IOL and COROL 365b PRO 8 365c 366a PROP 33 CHOL I PROP 34 367c 369a PART III 395 d
35 LOCK *Human U dersta di g* K II CH VII SECT 7 132d CH XIII SECT 26 154b-c CH XVI SECT I 165c d
35 BERKELEY *Human Knowledge* SECT 13 415c
42 KANT *Pure Reason* 43d-44a 44c 45b / *Judgement* 550a 551 c 564c 565d esp 565c d 580c d

1 The relat on of the one and the m ny ema t on of the m ny f om the one

7 P ATO *Repi blic* BK V 370d 373c K VII 392b 394b / *Parmenides* 486a 511d / *Sophist* 561d 574c esp 564d 574c / *Stat sman* 594d 595a / *Phileb s* 610d 613a
8 A ISTOTLE *Physics* BK I CH 8 [9 4 ^{b}12] 267 c / *Metaphys cs* K I CH 6 505b 506b CH 7 [988 34 ^{b}5] 506c BK V CH 6 [1016^{b}18 25] 537b [7 3 7] 537c BK X CH I [1052^{b}1–1053^{b}8] 578d 580a CH 6 583d 584 K XIV CH I 619b d 622
17 PLOT NUS *First E n d* TR V I CI 2 26c d / *S co d E ead* TR III CH II 46b c CH 18 49c 50a TR IX C I 8 70a d / *Th rd Ennead* TR I H 16 90c 91c TR III CH 93b c TR VII CH II 126a d TR V I 129 136a passim TR IX CH 3 137b / *Fourth En ad* TR II 139c 141c TR III CH 5 142a 144 TR IV C I I 159b d CH 10–1 163 164d CH 3 45 174b 183a R VI H 3 TR IX CH 5 202a 207 c / *F fth Ennead* TR I C I 4–9 209d 213 TR II C I I 214 215a TR III CH 10–12 221b 223 TR IV 226d 228b TR VII 238a 239b TR VIII CH 7 242d 243 / *S xth En ead* TR I H I–8 268d 273 C I 20– 278d 280d TR IV CH 4 299a d TR V 305 310d TR VI CH 7 313d 314a TR VII CH 4 7 323 331a
19 AQU *S mma Th olog a* P R QQ 3–11 14a 50b passim Q 14 A 6 AN 80 81 Q 16 A 6 98b d QQ 30–31 167a 175c QQ 44 45 238 250a Q 47 256a 259a Q 77 A 6 REP I 404c 405c Q 85 A 8 ANS 460b-461b QQ 103 I 5 528a 545b esp Q I 3 AA 3 4 530a 531b PART I II Q 17 A 4 AN 688d 689c
31 SP NOZA *Ethics* PART I 355 372d esp D 3 5 355b AXIOM I 355 d RO I–8 355d 357d PROP I 16 358b 362a P O 8 363 PR P 2 25 364a 365b O 9 366b c
42 KANT *Pur R.a o* 43d-44 49c 51d esp 51 d 74b 76 107b 173b-177b 197b-198a / *J idgement* 564c 565d esp 565c d 580c d
46 HE EL *Philosophy of History* INTRO 165a b PART III 306a

1b The unity or duality of God and the world the immanence and transcendence of God

8 ARISTOTLE *M taphysics* BK X I CH 10 [107$_5$ I 16] 605d
9 ARISTOTLE *Motion of Anim ls* CH 3 [699 11] CH 4 [700^{a}5] 234a 235a
12 EPICT TUS *D courses* BK I CH 14 120d 121
12 AURELIUS *Meditat ons* BK II SECT I 256b d BK VII SECT 9 280b c
18 AUGUSTINE *Co fess o s* BK I par 2 3 1b 2a BK I p r o 15b d pa 18 18b K IV p r 26 25c d par 31 26c 27a BK V p r 4 36a b BK VII par 1–7 43b 45d par 16–23 48 50c esp p r 2 49d 50 BK X par 8 10 73b 74 K XII par 7 100d 101a par I 103d 104a / *C ty of God* BK IV CH 12 13 195d 196b K VII CH 6 248 CH 30 261b d BK X CH 4 307 308a BK XI CH 7 353 354a C I –5 358b 359 / *Christian Doctrine* BK I CH 12 627c d
19 AQUIN S *Summa Th olog a* PART I Q 3 A REP I 14b 15b A 8 19d 20c Q 4 A 3 22b 23b Q 6 A 4 30b d Q 8 34 38 Q 16 A 6 98b-d Q 8 A 4 107d 108 Q 44 AA I – 238b 240a Q 51 A 3 REP 3 277a 278 Q 5 A 2 279b 280a Q 61 A 3 REP 2 316a d Q 90 A I 480d-481d QQ 103–105 528a 545b P RT I II Q 7 A 8 REP 2 692a-c
20 AQU N *Summa Th olog a* RT II II Q 26 A 2 RE 3 511a d PART III SUPPL Q 84 A 2 RE I 984c 985d
21 DANTE *Di ine Comedy* PAR DIS I [94 I 3] 107b c II [112 148] 109 b XIII [52–66] 126a XIX [40–66] 135c d XXVIII 148d 150b X X [27 14$_5$] 151c d XXXIII [6–145] 157a d
23 HO S *Let athan* ART I 162b
31 DE CARTES *Disc urse* PART V 54d 56a / *Objections and Replies* 110b 112a 123c d 158b 159a
31 SPINOZ *Eth s* A T I 355a 372d esp D 3–5 355b AXIO I I 355c d PROP – 8 355d 357d RO 10 CHO 358 b P O 3 COROL ROP 18 359d 363 PROP 22 23 364d 365a, ROP 25 ORO nd CHOL 365b OP 8 3 365 367a RO 33 34 367b 369a PART II ROP 373d 377c
32 M LTON *P d se Lo t* BK V [469–5 5] 185b 186 K XI [334 346] 306b
34 N WTON *P cipl s* K III GENERAL SCHOL 370a 371a
35 LOCKE *H man Under t d ng* BK II CH X II SECT 8 152a c CH XV S CT –4 162 163b K III CH VI SECT 2 271b 272b
35 B K LEY *Human K u ledg* SECT 149–5 442d-443b ECT 155 444b
35 HU *Human U dersta d g* T DIV 56 475 b

(1 *The transcendental one the Absolute the unity of being, of nature of the universe 1b The unity or duality of God and the world the immanence and transcendence of God*)

42 KANT *Pure Reason* 192c d / *Practical Reason* 342c 351b 352c / *Judgement* 550a 551a c 564c 565d esp 565c d 566c d 580c d 592a c
46 HEGEL *Philosophy of History* INTRO 156d 157b 176b c PART I 220c 221a 224a b 227d 228c 237d 238 245d 246c
48 MELVILLE *Moby Dick* 115b-117a
51 TOLSTOY *War and Peace* BK V 216d 218b BK XIV 608a b BK XV 631 c
52 DOSTOEVSKY *Brothers Karamazov* BK VI 153b-d

1c The one and the many in relation to the universal and the particular the abstract and the concrete universal

7 PLATO *Laches* 32a 33a / *Meno* 174d 175d / *Euthyphro* 193a c / *Republic* BK VI 383d 388a BK VII 392a 394a / *Parmenides* 486d 489a / *Theaetetus* 514b-515d / *Sophist* 559a c / *Philebus* 610d 613a
8 ARISTOTLE *Categories* CH 2 [1a20-b9] 5b-c / *Posterior Analytics* BK I CH 11 [77a5 9] 105d 106a CH 24 [85 31 b3] 116c [85b15-21] 117a / *Heavens* BK I CH 9 [277b26-278b9] 369a d / *Metaphysics* BK I CH 6 505b 506b CH 7 [988 34-b5] 506c BK III CH 4 [1001 8 b6] 520a b BK V CH 3 [1014b3 13] 534d CH 6 [1016b17-1017 3] 537b c CH 25 [1023b17 19] 545b c CH 25 [1 3b22]-CH 26 [1023b32] 545c BK VII CH 10 [1034b35 1036a25] 558b-559d CH 15 563c 564c BK X CH 1 578b d 580a esp [1052 28-37] 578d CH 2 580b d BK XII CH 8 [1074 32-39] 604d BK XIII CH 10 618c 619a c
17 PLOTINUS *Fourth Ennead* TR IX CH 5 206d 207a c
19 AQUINAS *Summa Theologica* PART I Q 3 A 2 REP 3 15c 16 Q 11 A 3 AN 49a c Q 13 A 9 AN and REP 71b 72c Q 14 A 6 ANS 80a 81c Q 30 A 3 ANS and REP 1 169b-170c A 4 170c 171b Q 47 A 2 ANS 257b 258c Q 77 A 1 REP 1 399c 401b Q 79 A 5 REP 2 418c-419b Q 93 A 9 ANS 500c 501c PART I-II Q 1 A 1 REP 3 662d 663d Q 17 A 4 AN 688d 689c
20 AQUINAS *Summa Theologica* PART I I Q 2 A 1 ANS 710a 711c
23 HOBBES *Leviathan* PART I 55b-c
28 HARVEY *On Animal Generation* 332a 333b
31 SPINOZA *Ethics* PART II PROP 40 SCHOL 1 387b-388a
35 LOCKE *Human Understanding* BK I CH XI SECT 9 145b-c CH XXXII SECT 6 244b c BK III CH I SECT 3 251d 252a CH III SECT 1 9 254d 256c passim BK VI SECT 1 268b SECT 3 33 277c 278c
35 BERKELEY *Human Knowledge* INTRO SECT 7 19 406a-410c passim esp SECT 12 16 408a 409d
35 HUME *Human Understanding* SECT XII DIV 125 507b [fn 1]
42 KANT *Pure Reason* 197b 198a 211c 213
46 HEGEL *Philosophy of Right* INTRO par 5 7 13a 14c par 24 17d 18a PART III par 156-157 57d par 165 59d par 185 186 64b-d par 353 360 112b-114a c / *Philosophy of History* INTRO 158a 159a 176b-177b PART I 237d 238a PART III 306a
53 JAMES *Psychology* 308a 311a passim

2 The modes of unity comparison of numerical essential and divine unity

8 ARISTOTLE *Physics* BK I CH 2 [185b5 186 4] 260b d / *Metaphysics* BK I CH 5 [986b8-987a1] 504c 505a BK V CH 6 536a 537c BK X CH 1 578b d 580a / *Soul* BK II CH 1 [412b8-9] 642c CH 4 [415a22 b8] 645c d
17 PLOTINUS *Fourth Ennead* TR IX CH 2 205c-206a CH 5 206d 207a c
19 AQUINAS *Summa Theologica* PART I Q 11 46d 50b esp A 4 49d 50b Q 30 A 1 REP 2 4 167a 168a A 2 REP 5 168a 169b Q 93 A 1 REP 3 492a d PART I II Q 17 A 4 A 5 688d 689c
20 AQUINAS *Summa Theologica* PART III Q 2 709d 723a esp A 9 719d 720c Q 17 806d 809d
31 DESCARTES *Objections and Replies* 224d 225d
31 SPINOZA *Ethics* PART II DEF 7 373c
53 JAMES *Psychology* 215b-216a

2a Numerical unity or identity the number one

7 PLATO *Republic* BK VII 392b-394b / *Theaetetus* 535b c 537a-c
8 ARISTOTLE *Categories* CH 5 [4 10-b19] 8b 9a / *Topics* BK I CH 18 [108b23 32] 153a c BK VI CH 4 [141b6-8] 194d / *Physics* BK IV CH 14 [223b12 224 14] 303c 304 c BK VII CH 1 [242 31 b4] 326c d / *Metaphysics* BK III CH 4 [1001a25-b25] 520a c BK V CH 6 [1016b18-1017a1] 537b-c CH 9 [1018 4-9] 538d CH 13 [1020 8-9] 541b BK X CH 1 578b d 580a CH 3 [1054 30-35] 581a CH 6 [1056b33 1057 16] 584b-c BK XI CH 7 [1072 33 34] 602b CH 8 [1074 31-39] 604d BK XIII CH 6-9 611d 618c BK XIV CH 1 [1087b34 1088 14] 620a b
11 EUCLID *Elements* BK VII DEFINITIONS 1 127a
11 NICOMACHUS *Arithmetic* BK I 814c 821d BK II 832b 838c d 839d 840a
17 PLOTINUS *Fourth Ennead* TR IX CH 2 205c-206a CH 5 206d 207a c / *Fifth Ennead* TR V CH 4 230b-d / *Sixth Ennead* TR II CH 9-11 273c 275d TR VI 310d 321b esp CH 5 312c 313b CH 11-16 315d 319d TR IX CH 1 2 353d 355a
19 AQUINAS *Summa Theologica* PART I Q 3 A 5 ANS and REP 2 17c 18b Q 7 A 4 ANS 33d 34c Q 10 A 6 45c 46d Q 11 A 1 REP 1 2 46d 47d A 2 AN 47d 48d A 3 REP 2 49a c A

4 REP 2 49d 50b Q 30 A 1 REP 4 167a 168a A 2 REP 5 168a 169b A 3 169b 170c Q 85 A 8 REP 2 460b 461b PART I II Q 10 A 1 REP 3 662d-663d
20 AQUINAS *Summa Theologica* PART III Q 2 A 3 REP 1 713a 714c A 9 REP 1 719d 720c Q 17 806d 809d PART III SUPPL, Q 79 951b 956b
28 GALILEO *Two New Sciences* FIRST DAY 146c 147a
31 DESCARTES *Rules* XIV 31b-c 32a b / *Geometry* BK I 296a
31 SPINOZA *Ethics* PART I PROP 12 15 359b 361d
33 PASCAL *Pensées* 512 262a
35 LOCKE *Human Understanding* BK I CH III SECT 4-5 113b c BK II CH XXVII 218d 228c passim BK IV CH I SECT 4 307b-c CH III SECT 8 315b-c
35 BERKELEY *Human Knowledge* SECT 12 13 415b-c
42 KANT *Pure Reason* 99a 101b

2b The unity of the indivisible or the simple the individual thing the point the atom the quality

7 PLATO *Republic* BK VI 392b-394b / *Parmenides* 506d 507b / *Theaetetus* 545b-547b / *Sophist* 566a d / *Philebus* 611b c
8 ARISTOTLE *Categories* CH 2 [1ᵇ3-9] 5c / *Topics* BK I CH 18 [108ᵇ23 32] 153a c / *Physics* BK I CH 2 [185ᵇ17 9] 260c BK II CH 7 [207ᵃ31 ᵇ10] 285d 286a BK IV CH 10 [218 3 30] 297d 298b / *Generation and Corruption* BK I CH 2 [316 5 317 17] 411d-413a / *Metaphysics* BK I CH 9 [992 18 24] 510b c BK I CH 4 [1001ᵇ7 19] 520b-c BK V CH 3 [1014ᵇ3 13] 534d CH 5 [1015ᵇ9-16] 536a CH 6 [1016 24 31] 537b BK XI CH 12 [1069 13-16] 598c BK XI CH 7 [1072 33 34] 602b / *Soul* BK III CH 2 [427ᵃ10-14] 659b c CH 6 [430 6-22] 663a b
9 ARISTOTLE *Ethics* BK X CH 4 [1174ᵇ9-14] 428d-429a
11 EUCLID *Elements* BK I DEFINITIONS 1 1a
11 NICOMACHUS *Arithmetic* BK II 832b
12 LUCRETIUS *Nature of Things* BK I [483-634] 7 8d
17 PLOTINUS *Fourth Ennead* TR I CH 2 142b c
19 AQUINAS *Summa Theologica* PART I Q 6 A 3 REP 1 29c 30b Q 8 A 2 REP 2 35c 36b Q 10 A 1 ANS and REP 1 3 5 40d-41d Q 11 A 1 ANS 46d-47d A 2 REP 4 47d-48d AA 3 4 49 50b Q 29 A 4 ANS and REP 3 165c 167a Q 30 A 1 REP 3 167 168a Q 4 A 2 REP 1 214b-215b Q 4 A REP 4 225d 227a Q 50 A 2 270a 272a Q 52 A 2 279b-280a Q 53 A 1 REP 1 280d 282 A 2 ANS 282a 283b Q 76 A 8 397d 399b Q 85 A 8 ANS and REP 2 460b-461b PART I-II Q 13 A 4 REP 2 675a-c
20 AQUINAS *Summa Theologica* PART I II Q 54 A 4 25b-d PART III SUPPL, Q 83 A 2 REP 5 976c 978c A 3 REP 4 978c 980d
31 DESCARTES *Rules* XII 20d 21b
31 SPINOZA *Ethics* PART I PROP 12 15 359b 361d PART II DEF 7 373c
34 NEWTON *Optics* BK III 541b
35 LOCKE *Human Understanding* BK II CH II SECT 1 127d 128a CH XV SECT 9 164b d CH XVI SECT 1 165c d BK III CH IV SECT 15 16 263a c
35 BERKELEY *Human Knowledge* INTRO SECT 7 406a b SECT 99 432b
42 KANT *Pure Reason* 120c 129c esp 121a 124d 1 6a 128b 130b 133c esp 131c 137a 140c esp 137d 138d [antithesis] 152a d 158a 159d 161d 163a 211c 213a

2c The complex unity of a whole composed of parts the distinction between the individed visible and the undivided

7 PLATO *Parmenides* 495c-497c 505c 506b / *Theaetetus* 545b 547b / *Sophist* 566a d
8 ARISTOTLE *Topics* BK VI CH 13 [150ᵃ1]-CH 14 [151 32] 204c 206a / *Physics* BK I CH 2 [185ᵇ11 17] 260b-c BK III CH 6 [206ᵇ33 207ᵃ31] 285b-d BK IV CH 3 [210ᵃ25 ᵇ8] 289b c / *Metaphysics* BK V CH 6 536a 537c CH 26 545c d BK X CH 1 578b d 580a CH 13 [1054ᵃ20-23] 581a / *Soul* BK III CH 6 [430ᵇ6-22] 663 b
9 ARISTOTLE *Ethics* BK X CH 4 [1174 13 ᵇ14] 428b-429a / *Politics* BK I CH 1 [1252 18 24] 445b CH 2 [1253 19-25] 446c
12 LUCRETIUS *Nature of Things* BK I [599-634] 8b d
17 PLOTINUS *Fourth Ennead* TR III CH 2 142a 143b TR IX CH 5 206d 207a c
19 AQUINAS *Summa Theologica* PART I Q 6 A 3 REP 1 29c 30b Q 11 A 1 ANS and REP 2 46d-47d A 2 REP 2 47d-48d Q 30 A 1 REP 4 167a 168a Q 39 A 3 ANS 204c 205c Q 85 A 3 REP 2 455b 457a A 8 ANS 460b-461b PART I II Q 17 A 4 ANS 688d 689c
20 AQUINAS *Summa Theologica* PART III SUPPL, Q 79 A 2 REP 2 953b 955c
28 GALILEO *Two New Sciences* FIRST DAY 145b-146c 150d 151
34 NEWTON *Principles* BK II RULE III 270b 271a
35 LOCKE *Human Understanding* BK II CH XX I SECT 4 201c d CH XXIV 214b d BK III CH V SECT 10-11 266b-d
35 BERKELEY *Human Knowledge* SECT 12 13 415b-c
46 HEGEL *Philosophy of Right* ADDITIONS 168 145 d
53 JAMES *Psychology* 104a 106b

3 Kinds of wholes or complex unities

8 ARISTOTLE *Metaphysics* BK V CH 6 536a 537 CH 25-26 545b d BK X CH 1 578b d 580a

(3 *Kinds of wholes or complex units*)

17 PLOTINUS *Fourth Ennead* TR III CH 2 3 142a 143d
19 AQUINAS *Summa Theologica* PART I Q 3 14a 20c Q 8 A 2 REP 3 35c 36b Q 11 A 1 REP 2 46d-47d A 2 REP 2 47d-48d Q 6 A 8 ANS 397d 399b Q 77 A 1 REP 1 399c-401b PART I II Q 1, A 4 688d 689c
20 AQUINAS *Summa Theologica* PART III Q 2 A 1 ANS 710a 711c PART III SUPPL, Q 79 A 3 ANS and REP 1 955c 956b
31 DESCARTES *Objections and Replies* 224d 25d
42 KANT *Pure Reason* 161d 163a

3a Quantitative wholes oneness in matter or motion

8 ARISTOTLE *Categories* CH 6 [4^b20–5 37] 9a d / *Physics* BK IV CH 5 [212^b29–33] 292b BK VII CH 1 [242^b23 243 3] 327a b / *Generation and Corruption* BK I CH 6 420b-421d CH 10 426c 428d / *Metaphysics* BK V CH 6 [1015^b 37 1016 16] 536b c [1016^b7 18] 537a b CH 13 541b-c CH 25 [1023^b13 18] 545b CH 26 [1023^b32 1024 10] 545c d BK X CH 1 [1052 18 28] 578b d BK XI CH 9 [1066 7 34] 594d CH 12 [1069 5 12] 598a c
9 ARISTOTLE *Ethics* BK X CH 4 [1174 13 ^{b}14] 428b 429a
17 PLOTINUS *Fourth Ennead* TR II CH 1 139d
19 AQUINAS *Summa Theologica* PART I Q 8 A 2 REP 3 35c 36b Q 11 A 2 REP 2 47d 48d Q 119 A 1 ANS 604c 607b
31 DESCARTES *Objections and Replies* 114d 115a
31 SPINOZA *Ethics* PART I PROP 15 SCHOL 360b 361d PART II D 7 373c LEM 4 5-7 379d 380b
42 KANT *Pure Reason* 129c 159d esp 130b 133c 137a 140c 152a d 161d 163a

3a(1) The continuity of a quantitative whole

8 ARISTOTLE *Categories* CH 6 [5 1 4] 9b c / *Physics* BK I CH 2 [185^b5 17] 260b-c BK III CH 6–7 284b 286 BK V CH 4 [211^a29–^{b}4] 290c CH 5 [212^b3–6] 291d BK V CH 3 307b 308b BK I CH 1 2 312b d 315d / *Metaphysics* BK V CH 4 [1014^b 0 27] 535 CH 6 [1015^b36– 016 17] 536b c CH 13 [1020 8 14] 541b CH 26 [1023^b3 36] 545c d BK X CH [1052 18 25] 578b BK XI CH 12 [1069 5 1] 598a c / *Soul* BK III CH 2 [4 7^a10–14] 659b CH 6 662d 663c
11 EUCLID *Elements* BK X PROP 1 191b 192
11 ARCHIMEDES *Spirals* 484b / *Quadrature of the Parabola* 527a b
11 NICOMACHUS *Arithmetic* BK I 811d 812a
17 PLOTINUS *Fourth Ennead* TR II CH 1 139d
19 AQUINAS *Summa Theologica* PART I Q 3 A 1 ANS 14b 15b Q 7 A 3 REP 3–4 32c 33 A 4 ANS 33d 34c Q 11 A REP 2 47d 48d Q 30 A 3 ANS 169b 170c Q 58 A 2 ANS 301b d Q 67 A 2 ANS 350b-351a Q 6 A 8 ANS 397d 399b Q 85 A 8 ANS 460b-461b
20 AQUINAS *Summa Theologica* PART III Q 2, A 3 REP 3 713a 714c PART III SUPPL Q 9, A 3 ANS and REP 1 955c 956b
28 GALILEO *Two New Sciences* FIRST DAY 139c 153a passim
31 SPINOZA *Ethics* PART I PROP 15 SCHOL 360b-361d
34 NEWTON *Principles* BK I LEMMA 1 25a LEMMA 11 SCHOL, 31a 32a
42 KANT *Pure Reason* 69c 72c 161d 163

3a(2) The unity and divisibility of a motion

8 ARISTOTLE *Physics* BK IV CH 11 [219 10–13] 298d 299a BK V CH 4 308b-310 BK VI 312b d 325d BK VII CH 1 [242 31 ^{b}4] 326c d BK VIII CH 7 [261^a28]–CH 8 [265 12] 347c 352a / *Metaphysics* BK V CH 6 [1016^a5] 536c CH 13 [1020^a25 33] 541c BK X CH 1 [1052 18 21] 578b BK XII CH 6 [1071^b8-11] 601b
9 ARISTOTLE *Ethics* BK X CH 4 [1174 13 ^{b}14] 428b-429a
17 PLOTINUS *Third Ennead* TR VII CH 8-9 123b-125d
19 AQUINAS *Summa Theologica* PART I Q 7 A 3 REP 4 32c 33c
28 GALILEO *Two New Sciences* THIRD DAY 201a 202a
30 BACON *Novum Organum* BK II APH 6 139b-c APH 41 173d 174b
33 PASCAL *Geometrical Demonstration* 434a 439b passim
34 NEWTON *Principles* BK I LEMMA II SCHOL, 31b
42 KANT *Pure Reason* 26b 27a 74b-76c 130b-133c
51 TOLSTOY *War and Peace* BK XI 469 d

3a(3) The unity and divisibility of matter

7 PLATO *Timaeus* 456a-457b
8 ARISTOTLE *Physics* BK III CH 6-7 284b-286c BK VI CH 4 316d 318a / *Heavens* BK IV CH 6 [313^b6– 2] 405a c / *Generation and Corruption* BK I CH 2 [315^b25 317 17] 411b-413a CH 8 [325 23–3 6^b28] 423d-425d CH 9 [327^a]–CH 10 [328^b 5] 426a-428d / *Metaphysics* BK VI CH 13 [1039^a2 1] 562d CH 16 [104 ^{b}3 16] 564c BK X CH 1 [1053^a21 24] 579d / *Sense and the Sensible* CH 6 [445^b4 446 20] 683b-684c CH 7 [449^a21 30] 688d 689a
10 GALEN *Natural Faculties* BK I CH 12 172d 173c
12 LUCRETIUS *Nature of Things* BK I [483–634] 7a 8d
17 PLOTINUS *Second Ennead* TR V CH 7 52c / *Fourth Ennead* TR II CH 1 139d
19 AQUINAS *Summa Theologica* PART I Q 3 A 1 ANS 14b 15b Q 7 A 3 REP 3 4 32c 33c A 4 ANS 33d 34c Q 16 A 7 REP 2 99 d Q

47 A 3 REP 2 3 258c 259a Q 50 A 2 ANS 270a 272a Q 119 A 1 ANS 604c 607b
20 AQUIN S *Summa Theologica* PART III Q 2 A 1 AN 710a 711c PART III SUPPL, Q 79 A 1 REP 3 951b-953b
28 G LIL O *Two Neu Sciences* FIRST DAY 139c 153a passim esp 147d 148b
30 BACON *Novum O ganum* BK II APH 8 140b
31 DESCARTES *Object ons a d Repl es* 112b
34 NEW ON *Optics* BK III 541b
35 LOCKE *Human Understand ng* BK II CH XVII SECT 12 170d CH XXIII SECT 31 212b c CH XXIX SECT 16 237b d BK IV CH X SECT 10 351d 352a
35 BERKELEY *Human Knowledge* SECT 47 421c-422a
42 KANT *P Reason* 100 d 131c 137a 140c 152 d 161d 163a
43 FED ALIST NUMBER 31 103d
45 FAR DAY *Res arches i Electricity* 850b d 855a,c

3 (4) The un ty and d v s bility of t me and sp ce

7 P ATO *Timaeus* 450c-451 456a 457b
8 AR S OTLE *Cat g ies* CH 6 [5^a6-29] 9b c / *Phy* BK IV CH 11 [219 10 13] 298d 299a BK VI 312b d 325d passim / *Generat on a d Corrupt* BK I CH I [337^a22 34] 439b c / *M t phy ics* BK V C I 13 [I 2 $^a25$ 34] 541c / *S ul* K III CH 6 [430^b6-19] 663a b
17 PLOTINUS *Th d Ennead* TR VII CH 8 3 123b 129a
18 A GU TIN *Confess ons* BK XI par 17 41 93b 99b
19 AQUINAS *Summa Theolog ca* PART I Q 7 A 3 REP 4 32c 33c A 4 REP 33d 34c
28 G LILEO *Two New Sc ences* THIRD DAY 201a 202a
31 D C RTES *Di course* PART IV 52d 53a / *Obj ctio d Repl es* 213b
33 PASCAL *Geometrical Demonstrat on* 434a 439b pa im
35 LOCKE *H ma U derstand ng* BK II CH X II SECT 13 4 151b d H XV SECT 9 164b d
35 B KELEY *Human Kn ul dg* ECT 98 432a
42 KANT *Pur Reason* 24a 26b 130b 133c 160b 163a 186d 187a
53 JA E *P y hology* 398a 399b 420 b 54 a 548b 631a

3b N t al or essent l whole the oneness of a b ng o nature

8 A I TOTLE *Met phys* K V CH 6 536 537c K X CH I 578b d 580a
10 G L N *Natu l Facult* K II CH 6 189a 190b
19 AQU N S *S mma Th ol gic* PART Q 8 A 2 REP 3 35 36b Q II A I P 46d 47d A 4 RE 3 49d 50b Q 3 A 9 ANS 71b 72 Q 85 8 AN 460b-461b PART I II Q 7 A 4 AN 688d 689c
31 DESCARTES *Objections a d Replies* 152d 155d 224d 225d
35 LOCKE *Human Understandi g* BK III CH VI SECT I 10 268b 271b passim esp SECT 4 268d 269b BK IV CH VI SECT II 334b 335b
35 BERKELEY *Human Knoul dge* SECT I 413a b SECT 12 415b c SECT 99 432b

3b(1) The dist nction between essent al and accidental unity

8 A ISTOTL *Posterior Analytics* BK II CH 10 [93^b36-38] 128b-c / *Metaphys s* BK V CH 6 536a 537c CH 27 545d 546a BK VII CH 4-6 552b 555a CH 12 561b 562a
9 ARISTOTLE *Pol t cs* BK VII CH 8 [1328 21 4] 532c
19 AQUINAS *Summa Theologica* PART I Q O A 6 ANS 45 -46d Q II A I REP 2 46d-47d Q 76 A 8 ANS 397d 399b Q 118 A 3 ANS 603b-604b PART I II Q 17 A 4 ANS 688d 689c Q 28 A I REP 2 740b-741a
20 AQUIN S *Summa Theologica* PART III Q 2 A I ANS 710a 711c A 6 716b 718b Q 3 A I R P 2 723b 724a Q 17 A 2 ANS 808d 809d PART III SUP L Q 79 A ANS and RE 4 951b 953b A 2 RE I 4 953b 955c
35 LOCKE *Human Under ta di g* BK III CH VI SECT I O 268b 271b pa sim esp S T 4 268d 269b

3b(2) The comp son of the un ty of natural things with man m de compositions or aggregations artificial wholes

8 ARIS OTLE *Metaphys s* BK V CH 6 [I 15^b35-0 6 9] 536b CH 26 [3^b3 36] 545 d K VI CH 3 [043^b 9- 4] 568 b K X CH I [052 8 25] 578b
19 AQUINAS *S mma Theologica* PART I Q 17 A 4 AN 688d-689c
20 AQU N S *Summa Theologica* PART I I Q 2 A I AN 710a 711c ART I UP Q 79 A 2 R 4 953b 955
42 KANT *Judgem nt* 557a 558b

3b(3) Th nity of ub t nce and of substan t l fo m

8 ARISTOTLE *Physics* BK I H 3 [86^b14 19] 261c d BK IV CH 2 [209^b -2 0 0] 288b d / *He ens* BK I C 9 [77^b26-278^b9] 369a d BK V CH 4 [3 I 17] 403d / *M t ply ics* BK V CH 6 [6 I- I] 537a CH 25 [023^b19-23] 545b c BK VII CH 17 565 566 BK VII CH 6 569d 570d K IX C I I [1046^a28 9] 571b K X H [5 28 34] 578d BK X CH 10 [075^b34-37] 606d BK XIII C I 2 [1077 O 3] 608c / *So l* K CH [4 ^{b}- 4 3^a2] 631 632a C I 5 [410^b10- 6] 640c K I CH 5 [4 $^a23$] K H [4 4^a28] 641b 644c
10 G LEN *Na l F c lt* K I I 172d 173c K II, CH 6 189 190b
19 AQ INA *S mm Th l g a* P RT I Q 3 AA 2-3 15 16d Q 7 A ANS 31a-d A 2 ANS

(3b Natural or essential wholes: the oneness of a being or a nature. 3b(3) The unity of a substance and of substantial form.)

31d 32c Q 11 A 1 REP 1 2 46d 47d A 4 REP 3 49d 50b Q 16 A 7 REP 2 99a d Q 29 A 2 R P 5 163b 164b Q 50 A 2 ANS 270a 272a Q 70 A 3 365b 367a Q 6 A 3 4 391a 394c A 8 ANS 397d 399b Q 85 A 4 ANS and REP 2 457a d Q 119 1 ANS 604c 607b P TI II Q 17 A 4 ANS 688d 689c

20 AQUINAS Summa Theologica P RT III Q 2 A 1 ANS and R 2 710a 711c Q 3 A / REP 1 728a 729a Q 17 806d 809d PART III SUPPL, Q 79 A 1 ANS and REP 4 951b-953b A 2 REP 1 2 4 953b 955c

31 DESCARTES Objections and Replies 152d 155d

31 SPINOZA Ethics P RT I DEF 3 355b PROP 5 10 356b-358b PROP 12 15 359b 361d

35 LOCKE Human Understanding BK II CH XXIII SECT 1-6 204a 205c SECT 37 213d 214b CH XXV I SECT 2 7 219b-221a BK III CH VI S CT 1 10 268b 271b passim esp SECT 4 268d 269b SECT 1 271b SECT 21 273c d SECT 42 280b c SECT 49 282 BK IV CH SECT 11 334b 335b

42 KANT Pure Reason 15b c 63 63d 64a 74b 76c 81b 83b 91d 93b 95a d 131c d 137 140c 162b 163a / Judgement 556d 558a 559b d 565b d 575c 576a

3b(4) The unity of man as composite of body and soul matter and spirit extension and thought

7 PLATO Cratylus 93b d / Phaedrus 124b d / Phaedo 231b-234 / Republic BK II 338a 339 / Timaeus 453b c / Laws BK V 686d 687

8 ARISTOTLE Metaphysics BK VII CH 10 [1035^b 3 32] 559a b BK VIII CH 3 [1043 9-^{b}4] 567d CH 6 569d 570d BK XII CH 1 [1075^{b}34-37] 606d / Soul BK I CH 1 [403^{a}2-^{b} 9] 632a d CH 5 [410^{b}10- 6] 640c [4 1^{b}5 18] 641 d BK II CH 1 2 642a 644c

9 ARISTOTLE Politics BK I CH 5 [1254 33 ^{b}7] 448a

12 LUCRETIUS Nature of Things BK III [94 176] 31b-32b [370-395] 34d 35a

12 EPICTETUS Discourses BK I CH 3 108b c BK V H 240d 242d

12 AURELIUS Meditations BK IV SECT 21 265b c BK VII SECT 55 283b c BK IX S CT 8 292b BK X C 3 310a b

17 PLOTINUS First Ennead TR I 1a 6b / Second Ennead TR C 1 5 37c / Fourth Ennead TR I CH 19- 3 151d 154b TR VII H 191 d CH 8 197 198b / Sixth Ennead TR II CH 4-8 323c 3 5

18 AUGUSTINE City of God BK V H 1 216c BK IX CH 8 17 289d 295c passim BK X CH 29 316d 318b BK XIII 1 16 367a d CH 19 369c 370c BK XI CH 2 3 377a 378d CH 5 379c 380b

19 AQUINAS Summa Theologica PART I Q 8 1 REP 1 34d 35c A 2 REP 1 2 35c 36b Q 5 2, REP 1 2 379c 380c A 4 381b-382a Q 6 385c 399b Q 118-Q 119 A 1 600a 607b P RT I-II Q 4 A 5 REP 2 632c 634b Q 17 A 4 A 5 and REP 3 688d 689c

20 AQUINAS Summa Theologica PART III Q 2, A 1 ANS and REP 2 710a 711c A 5 715a 716b A 6 ANS and REP 2 716b 718b Q 3 A 7 REP 1 728a 729a Q 17 A 2 ANS and REP 4 808d 809d PART III SUPPL, Q 79 AA 1 2 951b 9 5c Q 80 AA 1 2 956c 958b QQ 82-85 963a 992a

21 DANTE Divine Comedy PURGATORY XXV [34 78] 91d 92a

25 MONTAIGNE Essays 294c 295a 311a b 432b d 540a 543a c

30 BACON Advancement of Learning 48d 49c

31 DESCARTES Discourse PART IV 51d 52 P RT V 60b-c / Meditations II 77d 81d VI 98c 99a 99d 100a / Objections and Replies 119d 120 DEF VI VII 130 d DEF X 130d PROP I 133c 135d 136b 152d 155d 170b-c 207d 208a 209c 224d 225d 231a 232d 248b 276b-c

31 SPINOZA Ethics PART II PROP 11 13 377b-378c PART III PROP 2 396c 398b P RT V PREF 451a-452c

33 PASCAL Pensées 512 262a

35 LOCKE Human Understanding BK I CH III SECT 4-5 113b-c BK II CH XXVII SECT 6-8 220c 222a esp SECT 8 221d 222a SECT 15 224b c SECT 21 225d 226a SECT 27 29 227d 228 BK IV CH III SECT 6 313c 315b passim

35 HUME Human Understanding SECT VII DIV 52 472c 473c

36 STERNE Tristram Shandy 229b-230 270b 277a b

37 FIELDING Tom Jones 198a-c

42 KANT Judgement 557c 558b

46 HEGEL Philosophy of Right PART I par 47 48 24a c ADDITIONS 2 115d

53 JAMES Psychology 1a-4 esp 2b 3a 4a 84a 93b esp 88a 90b 116a 119b esp 118b 119b 130a 139a 140a 208 b 222b 223a

54 FREUD Interpretation of Dreams 154 155a

3b(5) The unity of the human person or the self the order of man s powers the split personality

NEW TESTAMENT Romans 6 12 14 7-8 13 3 14

7 PLATO Symposium 165d 166b / Gorgias 2 0d 271b / Republic BK IV 346a 355a esp 350b 355 / Timaeus 453b 454a 474b d 476a b

8 ARISTOTLE Soul BK III CH 6-11 662d 667a

12 EPICTETUS Discourses BK I C 1 3 4 108b-110a CH 12 118d 120b BK II CH 24 203c 210a

12 AURELIUS Meditations BK I SECT 1 253 BK V SECT 36 273d BK VI SECT 13 280c SECT 55 283b-c BK VIII SECT 1 285 b BK IX SECT 9 292b d

17 PLOTINUS Fourth Ennead TR IV CH 18 166d 167b

18 AUG STINE *Confessions* BK VIII par 10 11 55c 56b par 19–24 58b 60a BK X par 39 81b-c

19 AQUIN S *Summa Theologica* PART I Q 77 399b-407a Q 81 A 3 430c-431d QQ 93 101 492 523d PART I II Q 13 A 1 672d 673c Q 16 A 1 684b d Q 17 A 4 688d 689c Q 36 A 3 782b-783a

20 AQUINAS *Summa Theolog ca* PART I II Q 77 A 2 145d 147c QQ 81–83 162d 174b PART I Q 29 530b 533a PART I I Q 2 A I REP 2 710 711c A ANS and REP 2 3 711d 712d Q 6 740b 745b Q 17 A 2 ANS a d R P 4 808d 809d Q 19 A I REP 4 816a 818b PART III SUPPL, Q 70 A I 893d 895d Q 79 A 953b 955c

21 DANTE *Divine Comedy* PURGATORY IV [I 18] 57

25 MONTAIG E *Ess ys* 105c 107a 159a 162c 273b 276 300d 301c 326b 327b 381b-c 388c 389c

30 BACON *Adva cement of Learn ng* 72b

31 D SCARTES *Med tat o s* V 89a 93a

35 LOCKE *Human Understanding* BK II CH I SE T I 12 123d 124c SECT 19 126a c CH XXVII 218d 228c pass m esp SECT 9–26 222a 227d

41 GIB ON *De lm and Fall* 150c

42 KANT *Pure Reason* 49c 51d esp 51c d 120c 129c esp 121a 124d 126a 128b 200c 204c / *P f Metaphys l Elements of Ethics* 368d 369a / *Judgement* 584d 585c

47 G TH *Fau t* PART I [1064–1117] 26b 28a [32 7 3250] 79a b

51 TOL T Y *War d Peace* BK XII 554b 555c

53 J MES *Psychology* 1a b 130 139a pas im esp 134b 137b 147a 149a 154a 155b 188a 259b esp 192a b 205a 206 213a 219a 222a b 225a 258a

54 FR UD *O igi a d Develop ent f Psycho A alysi* 6a 9b / *Hy teria* 28d 29b 81d 83 esp 82a / *Un u* 430a b / *General I t o d ct on* 589c 593b esp 590 c 615b 616 633d 635 esp 634b / *Beyond the Pleasu e Principl* 640 d / *Gr p Psychology* 689d 690c / *Ego a d Id* 699a c 701d 707 p 701d 703 704d 711b 712b 716b esp 712b 715c 716a / *I l b t s Sympt m d Anxi ety* 721d 722d esp 722c 747a / *C l t n nd Its D c nt ts* 767d 768d / *N u I t d ct ry Le tu r s* 830 840a esp 8 0d 832a 836d 839b 843d 845b esp 845b

4 Unity in the realm of mind. un ty in thought o knowledge

4 Th unity of mind or int ll ct the cognitive facult s o con c ousn

8 AR S O LE *So il* BK I CH 3 [407a3] 636b d K I CH –5 6 6b d 6f2d C I 7 [431 o–b1] 663d 66 1a CH 8 [43 4] 664 d

17 PLOTINUS *Fourth En ad* TR III H 3 143b c

19 AQUINAS *S mma Theologica* PART I Q 76 A 2 388c 391a Q 79 AA 4–5 417a-419b Q 88 A I ANS 469a-471c

20 AQUINAS *Summa Theologica* PART I II Q 50 A 4 ANS 9a 10b

42 KANT *Pure Reason* 49c 51d esp 51c d 55a 56c 99a 101b 110d 112a 119a b 120c 129c esp 121a 124d 126a 128b 185b c 193a 200c esp 193d 194b 194d 195a 199a-c 200c 204c / *Practical Reason* 329a d / *Judgement* 463a 475d 570b 572b

46 H EL *Ph losophy of Right* PART III par 321 3 2 106c 107a par 343 110d 111a / *Phi losophy f History* INTRO 175c 177b

53 JAMES *Psychology* 1a b 154a 157b esp 156a 159b 161a esp 160a 161a

4b The unity of sense exper ence the unity of attent on the transcendental unity of apperception

7 PLATO *Th a tetus* 534d 535b

8 ARISTOTLE *Posterior Analytics* BK II CH 19 [99b36–1 0 14] 136b / *M taphysics* BK I CH I [980b25–981 I] 499b / *Soul* BK II CH II 654b-656 K I I CH I [425 14 b1] 657b-d C I 2 [426b7 427a15] 658d 659c CH 7 [431a20–b1] 663d 664a / *Sense and the Sensible* CH 7 685c 689a

17 PLOTINUS *Fourth E nead* TR III CH 3 143b-c

19 AQUINAS *Summa Theologica* PART I Q I A 3 R P 2 4c 5a Q 78 AA 3 4 410a 413d

20 AQUINAS *S mma Theologica* PART I II Q 77 A I ANS 145a d PART III SUPPL Q 82 A 3 REP 4 971 972d

21 D N E *D ine Comedy* PURGATORY IV [I 18] 57

35 B RK EY *Human Knowledge* SECT 99 432b

42 KANT *Pu e Re son* 48d 59b esp 49 51d

48 M VILLE *Moby Dick* 244b 245

53 JA ES *Psychology* 232b 238b esp 232b 234b 237a 238a 261a 269a 315b-318b passim esp 318 b 469a-471a 502b 503b 570a 572b esp 572a

4c Unity n th nking or understand ng the unity of complex ideas and d finit on th un ty of the term the judgment and the yllogism

7 PLATO *La h s* 3 a 33a / *Meno* 174a 179b / *Theaetetus* 51 b 515d 534d 536a 545b 547b / *Sophist* 559 c

8 AR TOTL *C t g r e* CH 5 [2 9–33] 6b [3 6–b9] 7b d / *I terpretation* CH 5 26b-c CH 8 27d 28a c 11 31c 32c / *P st r or A a lyt* K H 3 [84b3 –85a] 115d 116a BK II CH 6 [9 –8 33] 126b CH o [93b36–38] 128b c CH 13 [97b6–25] 133a b / *T p s* K I C 18 [108 7–37] 152b d K V C 3 [123 27 9] 171d H 6 [7b5–6] 177a K H 2 [139 9–32] 192 -d H 4 [41a–6 b2] 194c d H 5 [4 30–143] 196b- 10 [48a23]–CH [49 38] 202b 203d C I 13 [5]– H 4 [5 3] 204 20 K VI CH 3

(4 *Unity in the realm of mind unity in thought or knowl dge 4c Unity in think ng or under stand ng the un ty of compl x ideas and defin t ons the unity of the term the judg ment and the syllog sm*)

[153 6–22] 208a b [154 3 11] 209b CH 4 [154 15 18] 209c / *Sophist cal Refut t ons* CH 7 [169ᵇ3–6] 233b / *Metaphysics* BK IV CH 7 [1012ᵃ22 24] 532b BK V C 1 3 [1014 35 ᵇ3] 534c BK VII CH 4–6 552b 555a CH 10–12 558a 562a CH 17 565a 566a c BK VIII CH 2 [1043 2 28] 567c d CH 3 [1043ᵇ28 33] 568b CH 6 569d 570d BK X CH 1 [1052 8 37] 578d / *Soul* BK I CH 1 [4 2ᵇ1–9] 631c d BK II CH 3 [414ᵇ20–32] 644d 645a BK III CH 6 662d 663c c 1 8 [432 9–10] 664c

9 ARISTOTLE *Parts of Animals* BK I CH 3 166a 167d esp [643ᵇ10–35] 167a c

19 AQUINAS *S mma Theol g ca* PART I Q 58 A 2 301b d Q 85 A 4 457a d A 8 460b 461b

30 BACON *Ad ceme t f Le ni g* 59c d

35 LOCK *Human Understa d g* BK II CH X SECT 1 147b d SECT 5 8 148a d passim CH XVI SECT 1 165 d CH XXII SECT 4 201c d CH XXIV 214b d BK I c 263d 268a passim esp SECT 4 264b SECT 10–11 266b d CH VI S CT 28 33 276a 278c pas sim esp SECT 32 278a b CH XI SECT 18 304a b

35 BERKE EY *Hum n Knowledge* SECT 1 413a b

42 KANT *Pu e Reason* 43d 44a 44c–45b 45d 46a 49c 51d esp 51c d 107b 110d 112a 133c 193a 200c esp 195b d 197b 198a 234c / *Practical Reaso* 329a d / *Jud em t* 550a 551a c

46 HEGEL *Philosophy of H t ry* PART I 220c

53 J ES *Psy hology* 178a 184a c p 178b 179a 180a 213b–214a 820b 821a

4d The unity of science the un ty of part cular sciences

7 PLATO *Charmid s* 10b 11 / *Sympos um* 167a d / *Republ c* K III 333b d BK II 397c 398

8 ARISTO LE *Posterior Analytics* BK I CH 7 103c d CH 9 104b d CH 11 [7, 26 35] 106b CH 28 119c CH 32 120c 121b / *Top c* K II CH 3 [10ᵇ16–28] 155c / *Soph stical Ref at ons* CH 9 [1,0ᵃ–0–ᵇ3] 234b c / *Metaphysics* BK I CH 1 [995ᵇ4 26] 513d 514b CH 2 [996 18 997 34] 514d 516 BK IV CH 1 3 522a 525a K VI C 1 1 547b d 548c BK XI CH 1 4 587a 590a CH 7 8 592b 593d

17 PLOTINUS *Th d En d* TR IX CH 2 137a / *Fourth E ad* TR III CH 2 143 TR IX C 1 5 206d 207a c

19 AQUINAS *Summ Th ol gica* PART I Q 1 A 3 4c 5a

20 AQUINAS *S mma Th olog a* PART I II Q 57 A 6 REP 3 40 41a

23 HOBBE *Le iathan* PART I 71c d 72a d

30 BACON *Advancement of Learni g* 13a c 15d 16b 44c 45a 48d–49b

31 DESCARTES *Rules* 1 1a 2a

42 KANT *Pure Reason* 193a 200c esp 19ᵃb 198a / *Judgement* 560d 561a 578a b

51 TOLSTOY *War and Peace* BK V 197b BK VI, 248d 249a

53 J IES *Psychology* 1a–4a pass m

54 FREUD *New Introductory Lectu es* 874a

4e The one and the many or the simple and the complex as objects of knowledge the order of learning with respect to wholes and parts

7 PLATO *Phaed us* 126 c 134b–c / *Symposium*, 167a d / *Meno* 174 183a / *Phaedo* 231b 232b / *Republic* BK III 333b–d BK V 368c 373c BK VII 392b 394b / *Timaeus* 46 d / *Parmenides* 486a 511d / *Theaetetus* 534d 536a 537a c 545b 547b / *Soph t* 569d 5 0a / *Statesman* 594d 595a / *Ph leb s* 609b–613c

8 ARISTOTLE *Poster or Analytics* BK II CH 19 136a 137a c / *Topics* BK V C 1 5 [135ᵃ20–ᵇ6] 186d 187a / *Phys cs* BK I CH 1 259a b / *Metaphys cs* BK III C 1 4 [999 24 29] 518a BK V CH 6 [1016ᵇ18 5] 537b BK VII CH 17 [1041 6–ᵇ11] 565a d BK X CH 1 [10 2ᵇ1 1053 8] 578d 580a CH 3 [1054 0–29] 581 BK XI CH 10 594d 596a / *Soul* BK I CH 1 [40 ᵇ15 403 2] 631d 632 BK III CH 1 [425 4 ᵇ10] 657b d CH 6 662d 663c / *Sense nd the Sens ble* CH 7 685c 689a c

9 ARISTOTLE *Parts of Animals* BK I CH 1 [639 12 ᵇ9] 161b d / *Politics* BK I CH 1 [252 18–24] 445b

17 P OTINUS *Fo rth E nead* TR IV CH 1 159a d

19 AQUINAS *Summa Theolog ca* P RT I Q 3 A 3 REP 1 16a d Q 10 A 1 REP 1 40d–41d Q 1 A REP 4 47d 48d A 3 REP 2 49a–c Q 12 AA 8 10 57b–59d Q 14 AA 5–6 79a 81 A 10 R 1 83d 84c Q 30 A 1 REP 4 167a 168a A 3 RE 3 169b 170c Q 39 A 8 210 213 Q 58 2 301b d Q 85 AA 3 4 455b–457d A 8 460b–461b PART I II Q 10 A 1 REP 3 662d 663d

30 B CON *Advancement of Learning* 44c–45a / *No um O g m* PR 105a 106d BK I PH 19–36 108b 109b BK II A H 3–5 137c 139 AP 17 149b d AP 1 27 157b 158d II 30 159c d AP 1 35 162a 164a APH 37 168d 169c

31 DESCART S *R l s* VIII 14b c IX 14d 15d XII 18b–25a esp 20d 24c / *Discou rse* P RT I 46 48b

35 LOCKE *Human Unders and g* BK II C 1 II S CT 7 255c 56a CI VI SECT 32 277c 278b BK IV CH V S CT 11 334b 335b

35 BERK L Y *H man K owl dge* SECT 99 432b

35 HU IE *H m n Under and ng* S CT DIV 9 454c 455a

42 KANT *Pu e Re n* 49c 51d esp 51c d 110d 111c 193d 200c / *Pr ctical Rea on* 94a b / *J dgement* 572a b

51 TOLSTOY *Wa and Peace* BK V 197b BK T 248d 249a BK XII 555b c
53 J ES *Psychology* 315a 319 esp 317b 318b 327a 331b 360a 397a 406b 452b 453b [fn 1] 456b-457a 503b-504a 547a 548b 551b 552

4f The unity of knower and known or of s bject and object

7 PLATO *Seventh Letter* 809c 810d esp 810c
8 ARI TOTLE *Interpretat on* H 1 [16a4-9] 25a / *T pics* BK I CH 18 [108 17 37] 152b d / *Meta phys c* K XII CH 7 [107 b18 24] 602d 603a CH 9 [,4b35 1075 11] 605c d / *S l* BK CH 5 [409b18 411a7] 639c 641a BK II CH 5 [4 6b3 417a-] 647b [417a 7 1] 647d [418a2 6] 648 d BK CH 2 [425b17-426b8] 657d 658d H 3 [4-7 6-b6] 659 d C I 4 661b 662c CH 5 [430a14 16] 662c [43 a20-22] 662d C 7 [431 1 8] 663c CH 7 [431b13]-CH 8 [43] 664b c / *Sense and the Sens bl* C 1 6 [446b13 7] 685a b / *Memory a d Remin s nc* CH 1 [450 25 451 19] 691a 692b
17 PL TINUS *Th rd E nead* TR IX CH 1 136a d / *F fth Ennead* TR III CH 0 221b-222a TR VI CH 235b d
18 AU US N *Co fes o* BK X par 17 75c d par 19 76a b par 2 24 76d 77c par 7 28 78b-d / *C ty f God* BK VIII CH 6 269b
19 AQU A *Summa Th l gi a* ART I Q 4 A 2 76d 77d A 6 R 1 3 80a 81c A 9 REP 2 83b d Q 7 A I RE 153b 154b Q 85 A 8 REP 3 460b-461b Q 117 A I 595d 597c PART I II Q 28 A EP 3 740b 741a
42 K NT *Pu e Reas n* 23a 24 52c 53a 88b-91d
46 H G L *Phi os phy f Right* INTRO par 31 19 20 P RT III par 46-147 55c 56a par 343 110d 111a pa 360 113d 114 / *Pl loso phy f H story* INTRO 160c 161a
48 MELVILLE *Moby Di k* 231
53 JA ES *P ychology* 142a 143b 147a b 176a 178 232b 238b esp 232b 233 234a 235 236 237b 307a 309 311a p ss m e p 311a 852a

5 Unity in moral and polit cal m tters

5 The un ty of virtue nd the many v rtues

7 PLATO *La hes* 32 7b / *Protago* 48a 50d 5 64d / *Men* 174a 190a c esp 174 175d / *St e m* 605d 607a / *Laws* BK XII 795 797b
8 A I TO LE *Top* BK V CH I [8 34-39] 178d
9 A S OTLE *Eth c* K V I I [129b1-] 2 [1 30b29] 377 378b K VI 3 394b d
12 AUR LIUS *M d tat s* K VI S T 39 288c K X E T I 303b c
17 PLOTINU *F st Enn d* TR II H 7 9 10 TR I H 6 11d 12b
20 AQUIN *Summ Theologica* PART I I Q 6 A I 49d 50c Q 61 AA 3-4 56b 58b Q 65 70a 75a Q 68 A 5 92c 93c Q 73 A I 119c 120c PART II II Q 23 AA 4-8 485d 489c Q 184 A I 629a d
30 BACON *Advanc ment of Learning* 80a 81a
33 PASCAL *Pensé s* 2 175
42 KANT *Fu d Prin Metaphysic of Morals* 256a b / *Pr f Metaphys cal Elements of Ethics* 377d
43 MILL *Utilitariani m* 469a b

5b The unity of the last end the plurality of nte mediate ends or means

8 ARISTOTLE *Soul* BK III CH 10 [433b5 13] 666b
9 ARISTOTLE *Eth s* BK I CH 1-2 339 d CH 4 [109 13 29] 340b c CH 6 [1096 11 b8] 341b d
12 EP TETUS *Dis ot* BK I CH 14 189d
12 AUREL US *Med tat ons* BK V SE T 16 271 d BK VI SECT 42 278a
17 PLOTINU *Fi st Enn ad* TR IV CH 4 16 14a 19b / *Sixth En d* TR IX CH 6-11 357a 360d
18 AUGUSTINE *City of God* BK VII CH 4 266d 267c CH 8-9 270a 271a / *Ch istian Doct ine* BK I CH 35 634c d
19 AQUINAS *Summa Theolog a* PART I II Q I AA 5-8 613a 615c Q I A 3 RE I 670d 671b Q 3 A 3 R P 674c 675a Q 16 A 3 CON TRARY and RE 3 685b 686a
20 AQUIN S *Summa Tl eolog a* PART II II QQ 2-4 390d-409d
42 KANT *P Rea on* 234c 240b esp 235a b 236d 237 238 239a / *F nd Pr M ta phys c f Morals* 257 d 266 267d 271d 279d e p 273d 277b 286c 287d / *Practi al Rea n* 307a d 317a b 327d 329a 337a 355d / *J d ement* 588b [fn] 591b 592c sp 592a c 594 597d
43 MILL *Util ta a m* 448 461c-463d

5 The unity of subjective w ll and object e morality in the ethic l realm

46 H G *Ph l phy of R ht* NTRO par 8 14c pa 33 20b d ART I par 141 54b d PART I par 55 57c pa 183 64a pa 185 64b d pa 2 9 75b par 58 80b 81c p r 260 261 82a 83d pa 70 84d 89 par 353-36 112b 114a c esp par 36 113d 114 c A DI TIONS I 0-101 133a b 18 136a b

5d Th un ty of the fam ly d the un ty of the st te the limits of polit cal o social un ficat on

7 PL TO *Republ* BK V 343c 44a BK V 356b-365d / *Stat m n* 605d 608d
9 ARISTOTL *Eth* BK VIII C I [55a22 8] 406d BK IX CH 6 420 -421 / *P lit s* K I CH 445a 446d K II H I-6 455b d-461d esp H 2 455d 456 BK VII CH 4 530 d CH 8 532 533
18 AUGU TIN *C ty f God* K H 161b-c K XI H I 357 b K XVI CH 4 464d BK X X CH 4- 7 520 523a

(5 *Unity in moral and political matters 5d The unity of the family and the un ty of the state the l mits of pol tical or social un fication*)

20 Aquinas *Summa Theologica* part i ii q 81 a i ans 163a 164d
23 Hobbes *Leviathan* part ii 99a 101a 109c d 111a b 121a 152c d 155b
33 Pascal *Pens es* 871 344b
35 Locke *Civil Government* ch vii sect 78-80 4 b-43a
38 Montesquieu *Spirit of Laws* bk i 3b c bk x 64a 64d 65b bk xix 140a c
38 Rousseau *Political Economy* 367a 369a pas sim / *Social Contract* bk i 392b 393b bk iii 419c d bk iv 425a 427a
40 Gibbon *Decline and Fall* 18a
42 Kant *Science of Right* 455c-456a
43 Federalist number i 2 30d 32a nu i b r 14 60a 62d pa m esp 61b c
43 Mill *Representat ve Go ernment* 352b 353a 417c 433b pas im / *Ut litarianism* 460a 461c
44 Boswell *Johnso* 56a b
46 Hege *Phil sophy of Right* part iii par 158 159 58a par 173 61 b par 181 63c d par 2 o 84d 89 par 276 92b additions 117 135d 136a 161 143a b 168 145c d 1,8 147d 148a / *Philo ophy of H tory* intro 170c 178 part i 211a 212c 222a c 236a c part i i 302d 303a part iv 363c d
50 Marx Engels *Com m nist Manifesto* 421a d esp 421c d 427c-428b
54 Freud *Group Psychol gy* 677b 678b 684d / *C vil ation and Its Discontents* 785c 788d 791b c 799a 800a

5e The unity of sovereignty its divisib lity or ind sib lity the problem of federal union

23 Hobbes *Leviathan* part i 97c 98a c part 100c 105c 150b 151a 152a part i i 198a 199a
38 Mon squ eu *Sp it of Lau* bk i 3b bk ix 58b d 60a
38 Rou eau *Soc l Co t act* bk i 392b 393b bk ii 395a 396a k iii 406b d-410a 420d 422a c
41 Gibbon *De l ne and Fall* 577b-c
42 Kant *Scien e f Right* 437c d 439a-441d 452c d 455c-456 / *J dgement* 586a 587a
43 Constitution of the U S 11 20d p sim esp rticle v [583-590] 16d amendment x 18a
43 Federalist number 1-14 29a 62d passim nu ber 15 63d 64a 65c d number 18 20 71a 78b passim nu ber 32 105d 107b nu ber 39 126b 128b nu r 42 138 numb r 44 146d 147c num r 82 242b 244a
43 Mill *Repr entati Government* 428b-433b p sim
46 He el *Pl losophy of R ght* part iii par 2 6-278 92b 93a par 281 95b d par 321 3-2 106c 107a / *Philosophy of History* part ii 278c part iv 342b-d 355c d

6 Unity in the supernatural order

6a The unity and simplicity of God

Old Testament *Exodus* 20 1-6 / *De teronomy* 4 3) 5 6-10 6 4 32 29 / *I Kings* 8 23 60—(D) *III K gs* 8 23 60 / *P alms* 18 31—(D) *P lms* 17 32 / *Isa ah* 37 16 20 43 10-15 44 6 8 45 5-6 18 21 22 48 12—(D) *Isaias* 37 16 20 43 10-15 44 6 8 45 5-6 18,2 22 48 12 / *Jerem ah* 10 6—(D) *Jeremias* 10 6 / *Ho ea* 13 4—(D) *Osee* 13 4 / *Zechariah* 14 9 —(D) *Zacharias* 14 9 / *Malachi* 2 10—(D) *Malachias* 2 10
Apocrypha *Wisdom of Solomon* 12 13—(D) OT *Book of Wisdom* 12 13 / *II Maccabees* 1 24 25—(D) OT *II Machabees* 1 24 25
New Testament *Matthew* 23 9 28 / *Mark* 12 29-34 / *John* 17 3 / *I Corinthia s* 8 1-6 12 1 13 / *Ephesians* 4 1-6 / *I Timothy* 2 1-6 / *Jam s* 2 19
8 Aristotle *Physics* bk viii ch 10 353b-355d / *Metaphysics* bk xii ch 7 [1073 4 11] 603a b c 1 8 [1074 32 39] 604d ch 9 [10)) 11] 605c d
9 Aristotle *Ethics* bk vii ch 14 [1154b20-31] 406c
17 Plotinus *Sixth En ead* tr ix 35 d 360d
18 Augustine *Confes ons* bk i par 10 3b-c p r 12 4a bk iv par 24 25b-c par 29 26b bk vii par 2 43c-44a par 16-23 48c 50c esp p r 21 49d 50 bk xiii par 4 111c / *City of God* bk viii c 1 6 268d 269c ch 11 272c bk xi ch 10 327d 328d / *Christian Doctrine* bk i ch 5 625d 626a ch 32 633c d
19 Aquin s *Summa Theologica* part i q 3 14a 20c q 4 a 2 re 1 2 21b-22b a 3 22b-23b q 6 a 3 29c 30b q 7 a 2 31d 32c q 8 a 2 rep 2 3 35c 36b a 4 37c 38c q 11 46d 50b q 13 a i rep 2 3 62c 63c a 4 65c-66b a 11 73c 74b q 14 a i rep 2 75d 76c a 4 78b-79 q 26 a i rep 150b-c q 27 a i rep 2 153b 154b q 30 a i rep 3 4 167a 168a a 3 169b 170c q 40 a i rep i 213b-214b q 4 a i ans 238b-239a q 47 a i 256 257b q 50 a 2 rep 3 270a 272a a 3 rep 2 272a 273b q 54 a i ans 285a d a 3 rep 2 286c 287b q 55 a i ans and rep 3 289 d a 3 a i 291a d q 57 a i ans 295a d q 84 a 2 ans a d re 3 442b 443c q 88 a 2 rep 4 71c 472c part i ii q 18 a i ans 694a d
20 Aquinas *Summa Theolo ica* p t ii q 49 a 4 ans a 6 q 5 a 6 ans 11 12a q /3 a i rep 3 119 120 part iii q 2 a 2 ans and rep i 711d 712d q 3 a 2 r 3 724a c a 3 724c 725b q 6 a 5 rep 2 744a d
21 Dante *D v ne Com dy* par dise x ii [52 66] 126 xxiv [115 154] 143d 144b xxix [27 145] 151c d xxxiii [76-145] 157a d

23 HOBBES *Leviathan* PART II 151d
31 DESCARTES *Di course* PART IV 52a d / *Med it ions* III 81d 89a sp 88a b / *Obje tions and Repl es* 122b c 232b
31 SPINOZA *Ethics* PART I 355a 37 d esp DEF I 355a DEF 3 6 355b AXIO I 2 355c d PROP I-8 355d 357d PROP 13 15 359c 361d PROP 16 CO I 3 362a PROP 17 COROL 2 62b PROP 18 363c, P OP 20 363d 364a PROP 9 SCHOL 366b c PART II PROP 4 374c PRO 7 CHOL 375b
35 LOCKE *Human Understand g* BK I CH III S CT 15 116c d K II CH XXIII SECT 35 213b-c BK II CH VI, SECT II 271b d
40 GIBBON *Decl ne and Fall* 307b c
41 G BBON *Decl n and Fall* 229c 230b
42 KANT *P e Reason* 176b c 192c d 205a b
46 H GEL *Philos phy of History* PART I 224a b 227d 228a PART III 306a c PART IV 322a c

6b The unity of the Trin ty

NEW TESTAMENT *J hn* 1 1-5 / *I John* 5 7
18 AU USTINE *Confessions* BK XIII par 12 113b d par 32 119 b / *City of God* K X CH 23 24 312c 313a BK XI CH 10 327d 328d CH 24 8 335 338d / *Ch i tan Do trine* BK I CH 5 625d 626a
19 AQUINAS *Summa Theolog ca* PART I Q I A 4 CO TRARY 49d 50b QQ 27 31 153 175c Q 39 A 8 210 213a Q 42 224a 2 0a
20 AQUIN S *Summa Theol gica* PART III Q 2 A 3 REP I 713a 714 Q 3 A 3 724c 725b Q 17 A I REP 5 807a 808d A 2 REP 3 808d 809d PART III UPPL, Q 95 A 3 ANS 1045b 1046d
21 DANTE *D ine Comedy* PARAD E XIV [28-33] 127b XXIV [115 154] 143d 144b XXXIII [76- 45] 157 d
22 CHAUCER *Troilus and Cr ssida* BK V STANZA 267 155a / *Second Nun s Tale* [15 798-809] 467a b
23 HO BES *Le athan* PART III 207b 207d 208c PART IV 259d
30 BACON *Ad ancement of Lea n ng* 100c d
31 D SCARTE *Object ons a d Replies* 232b
32 MILTON *Chr sts Nat t ty* [1 14] 1a b / *Parad se Lo t* BK V [600-615] 188b BK XII [469-551] 329b 331a
40 GIBBON *De line and F ll* 307a 313d esp 307b-c 310b 312a 605a b
46 HEGEL *Philo ophy of History* PART III 303d 304a 306a-c

6c The unity of the Incarnation

NEW TEST MENT *John* 1 9-14 10 30 38 14 10-11 / *Philippians* 5 7 / *Col ss ans* 2 9
18 AUGUSTINE *City of God* BK IX CH 14-17 293a 295c BK X CH 29 316d 318b / *Chr stian Doctr ne* BK CH 13 627d
20 AQU N S *Summa Theolog* ART III QQ 1-26 701b d 846d esp Q 2 709d 723a Q 17 806d 809d PART III SUPPL, Q 95 A 3 ANS 1045b 1046d
21 DANTE *D vine Comedy* PURGATORY XXXI [76- 26] 101c 102a PARAD II [31 45] 108a VII [25 33] 115c XXXIII [76 145] 157a d
33 PASCAL *Pensees* 512 262 765 322a
40 GIB ON *Decline and Fall* 308a b
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Chapter 64 OPINION

INTRODUCTION

THE noble Houyhnhnms are paragons of reason They have no conceptions or ideas of what is evil in a rational nature Their grand maxim according to Swift their creator is to cultivate reason and to be wholly governed by it Neither is reason among them a point problematical as with us where men can argue with plausibility on both sides of the question but strikes you with immediate conviction as it needs must do where it is not mingled obscured or discolored by passion and interest

What Captain Gulliver finds most striking in the contrast between men and this noble race of horses is that the perfect rationality of the Houyhnhnms lifts them entirely above the vagaries and vicissitudes of opinion I remember it was with extreme difficulty he says that I could bring my master to understand the meaning of the word *opinion* or how a point could be disputable because reason taught us to affirm or deny only where we are certain and beyond our knowledge we cannot do either So that controversies wranglings disputes and positiveness in false and dubious propositions are evils unknown among the Houyhnhnms

Among men it is not the meaning of opinion but of knowledge which causes trouble If men had no conception of knowledge at all as the Houyhnhnms seem to have no conception of opinion they would find themselves disagreeing about many matters of opinion but probably not about the nature of opinion itself The great controversies concerning opinion in the tradition of western thought all relate to its distinction from knowledge both with regard to the difference in their respective objects and with regard to the way in which the mind works when it knows and when it opines

Only when something better than opinion is proposed as attainable do the characteristics of opinion come to be questioned That something may stand in relation to opinion as certainty to probability as fact to conjecture as adequate to inadequate knowledge as demonstration to persuasion The chief source of disagreement about the nature of opinion seems to be the meaning of the other term in the comparison Yet a few commonly recognized features of knowledge—if that is taken as the contrasting term—throw some light on the characteristics of opinion Certain things which are never said about knowledge seem to be generally said of opinion

AN OPINION it is said may be either true or false But knowledge is never said to be false For a great many writers though not for all doubt and belief are attitudes of mind which accompany the holding of opinion but not the possession of knowledge It is possible to opine and doubt at the same time but not to know and doubt Belief overcomes doubt with respect to opinion but in those matters in which the mind is convinced of the truth of its judgments an act of belief does not seem to be necessary

In the sense in which belief implies a willingness to assent where assent might reasonably be withheld belief seems to be appropriate to opinion but incompatible with knowledge The opposite of an opinion may be reasonably maintained whereas the opposite of that which is known must be error or falsehood and therefore untenable The traditional distinction between axioms and postulates (or assumptions) exemplifies this difference between knowledge and opinion If a proposition is axiomatic its contrary must be false But if something is proposed as an assumption to be taken for granted

then its opposite can also be postulated and probably will be postulated by those who are unwilling to grant what has been proposed

This last point in the comparison of knowledge and opinion appears to have political significance It is not merely that men are accustomed to expect more disagreement in the sphere of politics than in science they take a different attitude toward scientific and political controversy largely because one is supposed to occur in the domain of knowledge and the other in the realm of opinion Men speak of having a right to their own opinions which includes a right to persist in them despite the conflicting opinions of others. The notion of a right to a certain obstinacy in differing from one s fellow men seems to follow from the nature of opinion and to accord with its distinction from knowledge With regard to matters concerning which it is supposed that knowledge rather than opinion is possible disagreement may of course occur but never without the expectation that reasonable men should be able to reach agreement on the disputed point by re-examining the facts

The differences between men which we appeal to a consensus to resolve are differences of opinion not knowledge Sometimes conflicts of opinion cannot be settled in any other manner and for practical purposes it may be necessary to accept the opinion of the majority The theory of majority rule raises many questions on which the great books take opposite views but for the most part they restrict the application of the theory to matters of opinion Disputed issues in mathematics or other theoretic sciences are seldom if ever settled by counting heads The weight of numbers seems to be peculiarly relevant to measuring the worth of conflicting opinions

The traditional consideration of opinion naturally divides therefore into two major lines of discussion The first deals with the theoretical problem of the difference between knowledge and opinion and involves such related terms as doubt belief faith certitude and probability The second assumes that distinction for the most part and deals with the problems of decision and responsibility in the sphere of opinion—the problem of liberty of conscience of freedom of thought and expression of majorities and minorities and of individual judgment in difficult cases of conscience.

THE DISTINCTION between knowledge and opinion is sometimes made in terms of a difference in their objects and sometimes in terms of a difference in the way the mind works when it knows and when it opines These two modes of differentiation may of course supplement one another—the object of opinion being such that the mind must operate in a certain way with respect to it The same authors usually treat the matter both ways But not all the great books in which these things are discussed use the words knowledge and opinion to signify the basic opposition

Locke for example says that the mind has two faculties conversant about truth and falsehood first knowledge whereby it certainly *perceives* and is undoubtedly satisfied of the agreement or disagreement of any ideas secondly judgment which is the putting ideas together or separating them from one another in the mind when their certain agreement or disagreement is not perceived but *presumed* to be so. To the faculty of judgment belongs belief assent or opinion which is the admitting or receiving of any proposition for true upon arguments or proofs that are found to persuade us to receive it as true without certain knowledge that it is so

As demonstration is to persuasion as certainty is to probability so for Locke knowing or perceiving stands to judging or presuming Others, like Hume tend to use the term belief in the place of opinion as the opposite of knowledge or like Spinoza to assign opinion along with imagination to the domain of inadequate as opposed to adequate knowledge But such differences in vocabulary do not seem to obscure the fact that these authors are making distinctions which if not identical are at least analogous

A certain parallelism or analogy exists between different statements of the objects of knowledge and opinion The knowable seems to have the properties of necessity and immutability of universality clarity and distinctness. That which is contingent and variable or confused and obscure is usually regarded as the object of opinion

Plato for example says that that which is apprehended by intelligence and reason al ways is and has no becoming whereas that which is conceived by opinion with the help of sensation and without reason is always in a proc ess of becoming and perishing and never really is As understanding and reason divide the realm of knowledge whose object is the im mutable being of the intelligible forms so fan cy and perception divide the realm of opinion whose objects are the sensible things which come to be and perish

According to Aristotle the object of science is the essential and the necessary the object of opinion the accidental and the contingent To whatever extent sensible particulars involve contingent accidents of all sorts they belong to opinion while the intelligible essences of things universal in the sense of being common to many individuals belong to science The parallel which so far seems to be present between Plato s and Aristotle s statements of the objects of knowledge and opinion does not continue when we consider the consequences of their analyses

For Aristotle it is possible to have scientific knowledge as well as probable opinion about the changing things of the physical world to the extent that these things are both intelligible and sensible and have aspects both of necessity and contingency But for Plato the realm of becoming belongs exclusively to opinion as the quite separate realm of being belongs exclusively to knowledge In consequence Aristotle s enu m ration of the sciences includes physics along with mathematics and theology wherea the study of the physical world does not yield a sci ence according to Plato but only as he says in the *Timaeus* a likely story —a plausible composition of probable opinions

At first glance Hume seems to provide a closer parallel to Plato All the objects of human reason or enquiry may naturally be di vided into two kinds he writes *relations of ideas* and *matters of fact* Objects of the first sort are capable of demonstratively certain knowledge *e g* the mathematical sciences Matters of fact which include quest ons con cerning the real existence of anything or the causal connection of one thing with another do not permit demonstration They are objects of belief or opinion

It would seem therefore that Hume like Plato regards the objects of knowledge and opinion or science and belief as belonging to altogether distinct realms They even seem to agree that physics cannot be classified as a science though the probabilities it establishes may be quite sufficient for action But this agreement must be qualified by the fact that the realm of ideas is for Plato the reality which changing things image while for Hume ideas have no reality at all They exist only in the mind which obtains them from the impressions of sense-experience

A parallel between Hume and Aristotle might also be drawn at least insofar as both connect opinion with the contingent—that which can be otherwise If the opposite of a proposition is not impossible or does not lead to self contra diction then the proposition and its contrary are matters of opinion This criterion in Aris totle s terms excludes all self evident and de monstrable propositions Such propositions for both Hume and Aristotle expres knowledge not opinion Yet Aristotle unlike Hume does not seem to think that the real existence even of immaterial beings is indemonstrable or that no necessary connections can be discovered be tween cause and effect.

THESE EXAMPLES might be extended to include similar observations concerning Locke Spi noza Kant James —in fact almost every writer who distinguishes between knowledge and opin ion by reference to characteristically different objects In the tradition of western thought the major controversies concerning the objects of knowledge and opinion occur with regard to the kind of being or reality assigned to each type of object and in consequence with re gard to applications of the distinction One writer treats as knowledge what another by apparently the same criterion calls opinion The term opinion gets its skeptical impact from this circumstance The skeptic never den es that men can form opinions about a given sub ject he denies that the topic can be a matter of certain or unquestionable knowledge

Skepticism approaches its limit when it is maintained that e erything is a matter of op n ion At the furthest extreme it is sometimes said that nothing is e ther true or false though

Aristotle and others argue that such skepticism is self destructive since the proposition nothing is true or false is inconsequential if it is false and self contradictory if it is true But the proposition everything is a matter of opinion can itself be an opinion and its opposite an opinion also

The position which Montaigne takes in the *Apology for Raimond de Sebonde* is not the provisional skepticism of universal doubt in order to discover the foundations of certain knowledge It is rather a resolute skepticism which reduces all human judgments to the status of equally tenable opinions and gives man no hope that he will ever be able to do better than adopt opinions on insufficient grounds or else suspend judgment entirely No axioms according to Montaigne have ever won the universal consent of mankind no demonstrations have ever escaped the need to assume their initial premises Unless men beg the question in this way they cannot avoid an infinite regress in reasoning There is no proposition about which men have not disagreed or changed their minds Illusions and hallucinations suggest the pervasive unreliability of the senses as errors of judgment and reasoning suggest the radical infirmity of the mind

How variously do we judge of things? Montaigne asks How often do we alter our opinions? What I hold and believe today he continues I hold and believe with my whole belief I could not embrace nor preserve any truth with greater assurance than I do this but has it not befallen me not only once but a thousand times and every day to have embraced some other thing with the same instruments and in the same condition which I have since judged to be false? A man must at least become wise at his own expense if I have often found myself betrayed under this color if my touch prove ordinarily false and my balance unequal and unjust what assurance can I now have more than at other times? We ought to remember that whatever we receive into the understanding we often receive things that are false and that it is by the same instruments that so often give themselves the lie and are so often deceived

Montaigne exempts religious faith from the uncertainty of all beliefs or opinions which man arrives at through the unaided efforts of his senses and his reason Though we must accompany our faith with all the reason we have we must do so always with this reservation not to fancy that it is upon us that it depends, nor that our arguments and endeavors can arrive at so supernatural and divine a knowledge Faith is distinguished from ordinary belief according to Montaigne only if it enter into us by an extraordinary infusion

What is an article of faith to one man may however be merely a matter of opinion to another This seems to be generally recognized by all who differentiate religious faith from secular belief The difference lies not in the object but in the causes of belief

Those who distinguish between knowledge and opinion also admit that a difference in the way the mind judges is able to produce either knowledge or opinion concerning the same object It is impossible according to Aristotle for the same mind with regard to the same object to know and opine at the same time A given individual for example cannot hold a proposition of geometry to be true *both* as a matter of knowledge and of opinion But this does not prevent the individual who once held the proposition to be true merely on the authority of his teacher—and thus as a matter of opinion—from subsequently learning the reasons for its truth and thus coming to know what formerly he merely opined Two individuals may likewise assert the same truth in different ways the one as knowledge the other as opinion

The traditional account of the difference in the activity of the mind when it knows and when it opines appears to involve two related points The point which both Plato and Aristotle emphasize is that the man who knows does not merely assert something to be true but has adequate reasons for doing so The truth of right opinion is no less true than the truth of knowledge It differs as the discussion in Plato's *Meno* and *Theaetetus* seems to show in that the man of right opinion cannot explain why what he asserts is true He cannot give the causes of its truth or trace its connections with other truths which help to demonstrate it The fact that an opinion is true does not prevent its being overturned or given up since without adequate reasons it is insecure against attack Un

supported by reasons opinion is not only unstable as compared with knowledge but it is also unteachable in the sense in which knowledge can be learned and taught The man of right opinion unable to explain satisfactorily why he thinks as he does cannot help others understand the rightness of his opinions

The other characterization of the mind s activity in forming opinions seems to follow from the preceding observation If reasons do not determine the mind to think *this* rather than *that* what is the cause of its judgment? If the mind is not compelled by the object under consideration to think of it in a certain way what does move the mind in its act of assent or dissent to that which is proposed? To such questions the traditional answer seems to be wish or desire whether an act of free choice on the part of the will or an inclination determined by the driving power of the emotions

Pascal makes this point when he observes that there are two ways in which men come to think as they do The more natural way is that of the understanding for one should only agree to demonstrated truths but the more usual is that of the will for all men are nearly always led to believe not by proof but by inclination Hobbes similarly differentiates knowledge which rests upon definitions and demonstrations from the opinion or beliefs which the mind adopts not as the result of reasoning but by an act of will

The assent of reason is not according to Aquinas subject to command by the will in respect to all matters on which the reason can judge If that which the reason apprehends is such that it naturally assents thereto e g first principles it is not in our power to assent to it or to dissent For in such cases he holds assent follows naturally and consequently properly speaking is not subject to our command But some things which are apprehended do not convince the intellect to such an extent as not to leave it free to assent or dissent or at least suspend its assent or dissent for some cause or other and in such things assent or dissent is in our power and is subject to our command

Knowledge it would seem consists in those judgments wherein the mind is moved to assent solely by the matter being considered whereas all matters about which we are free to make up our minds one way or the other are matters of opinion

Though they vary in the terms of their analyses Descartes Locke and Hume seem also to agree that when the mind is moved to assent by the relations it perceives between ideas especially when these are clear and distinct it knows beyond doubt or the possibility of error But when the mind lacking such intuitive or rational grounds nevertheless forms a judgment concerning what is not evident then the result is opinion entertained as merely probable accompanied by doubt and subject to error

For Descartes the will freely exercised moves the mind to such fallible judgments Except when it is so moved the mind responding to its object alone is naturally infallible For Hume the mind is free to imagine whatever it pleases but its beliefs are determined by a sentiment or feeling of instinctive origin which depends not on the will nor can be commanded at pleasure The issue between those who connect opinion with free will and those who deny that beliefs are voluntarily formed is discussed in the chapter on WILL It does not seem to affect the fairly general agreement on the point that opinion is an act of the mind caused by *something other than the object itself* which the mind is considering

DOES THIS DISTINCTION between knowledge and opinion exhaustively divide all the acts of the mind? As we have seen Montaigne appears to reject both alternatives and substitutes instead supernatural faith and ordinary belief Aquinas on the other hand accepts knowledge and opinion as exhaustive on the plane of the mind s natural operations and makes religious faith a supernatural alternative to both

He calls faith a mean or intermediate between science and opinion because he conceives it as having some of the characteristics of each To believe he says is an act of the intellect assenting to the truth at the command of the will In this faith resembles opinion The act of faith is due to the will rather than to the rational evidence of the object Faith is the evidence of things unseen But faith also resembles science because the affirmations of faith have the certitude or freedom from doubt

which characterizes knowledge According to Aquinas faith has greater certitude than natural knowledge since as intellectual virtues science wisdom and understanding are based upon the natural light of reason which falls short of the certitude of God s word on which faith is founded Faith differs from knowledge in that the object of faith exceeds the intellect s comprehension That is why faith requires an act of the will to move the intellect to assent but whereas ordinary opinions are adopted by a man s own volition Aquinas attributes faith to God Faith he writes as regards the assent which is the chief act of faith is from God moving man inwardly by grace

Just as skepticism with respect to science takes the form of reducing all human judgments to opinion so skepticism with respect to religion takes the form of attributing all belief to purely natural causes If Freud is correct that all beliefs are the product of wishful thinking then it is difficult to separate religion from superstition or prejudice—or even perhaps to separate science from religion

James finds the will to believe in science as well as religion Like Freud he explains belief in terms of emotion and desire Will and Belief meaning a certain relation between objects and the Self he writes are two names for one and the same *psychological* phenomenon Except for those necessary truths which concern only ideal relationships the mind in thinking about reality is free to choose between alternative theories in the sphere of science as well as in religion To believe is to attribute reality to a theory Though the operation of the will to believe is not for James entirely independent of objective criteria neither is it mainly determined thereby

That theory will be most generally believed he says which besides offering us objects able to account for our sensible experience also offers those which are most interesting those which appeal most urgently to our aesthetic emotional and active needs So-called scientific conceptions of the universe have so far gratified the purely intellectual interests more than the mere sentimental conceptions have But they leave the emotional and active interests cold *The perfect object of belief would be a God or Soul of the World represented both optimistically and moralistically (if such a combination could be) and withal so definitely conceived as to show us why our phenomenal experiences should be sent to us by Him in just the very way in which they come*

OPINION RAISES moral and political as well as psychological issues of liberty One of them is the problem of freedom of discussion This problem has aspects which belong to other chapters—freedom in scientific inquiry to SCIENCE freedom in artistic or poetic expression to ART and POETRY freedom of conscience and worship to RELIGION freedom in teaching to EDUCATION and the general issue of freedom of thought and speech to the chapter on LIBERTY Yet what is common to all these related questions seems to be determined by the nature of opinion particularly in its distinction from knowledge

None of the books which argue for freedom of expression—Milton s *Areopagitica* Locke s *Letter Concerning Toleration* or Mill s essay *On Liberty*—defends the right to disseminate error or falsehood *knowingly* All of them argue that the individual who claims the right to be heard is morally bound by the duty to speak the truth as it appears to him Nor do those like Plato and Hobbes who recommend political censorship seek thereby to fortify the state by suppressing truth In saying that the sovereign should judge of what opinions and doctrines are averse and what conducing to peace Hobbes observes that though in matters of doctrine nothing ought to be regarded but the truth yet this is not repugnant to regulating the same by peace For doctrine repugnant to peace can no more be true than peace and concord can be against the law of nature

Since knowledge as distinct from opinion has the character of incontrovertible truth the issue of freedom or censorship cannot be stated in terms of knowledge But what some men hold to be knowledge others regard as opinion The issue of free expression applies therefore to the entire range of human thought on the supposition that *no* proposition or doctrine is exempt from controversy and no human judgment secure from contradiction This supposition does not abolish the distinction between knowledge and opinion nor does it flout the law of

contradiction by treating opposite answers to the same question as in fact equally true

If all mankind minus one were of one opinion and only one person were of the contrary opinion mankind according to Mill would be no more justified in silencing that one person than he if he had the power would be justified in silencing mankind The peculiar evil of silencing the expression of an opinion is that it is robbing the human race posterity as well as the existing generation those who dissent from the opinion still more than those who hold it If the opinion is right they are deprived of the opportunity of exchanging error for truth if wrong they lose what is almost as great a benefit the clearer perception and livelier impression of truth produced by its collision with error

Mill advances four distinct reasons for recognizing the necessity to the mental well being of mankind (on which all their other well being depend) of freedom of opinion and freedom of the expression of opinion First if any opinion is compelled to silence that opinion may for aught we can certainly know be true To deny this is to assume our own infallibility Secondly though the silenced opinion be an error it may and very commonly does contain a portion of truth and it is only by the collision of adverse opinions that the remainder of the truth has any chance of being supplied Thirdly even if the received opinion be not only true but the whole truth unless it is suffered to be and actually is vigorously and earnestly contested it will by most of those who receive it be held in the manner of a prejudice with little comprehension or feeling of its rational grounds And not only this but fourthly the meaning of the doctrine itself will be in danger of being lost or enfeebled

The aim is not to perpetuate controversy nor is it to keep all doctrines perpetually on the level of debatable opinion As mankind improve Mill writes the number of doctrines which are no longer disputed or doubted will be constantly on the increase and the well being of mankind may almost be measured by the number and gravity of the truths which have reached the point of being uncontested The cessation on one question after another of serious controversy is one of the necessary incidents of the consolidation of opinion a consolidation as salutary in the case of true opinions as it is dangerous and noxious when the opinions are erroneous

As Mill argues the case for freedom of thought and discussion it appears to be based on the hypothesis that the public debate of all matters, carried on without any restriction except those minimum restraints needed to prevent violence serves the end of separating true from false opinion and by the clarification of opinion as well as the correction of error discovering the reasons which turn opinion into knowledge It is not to multiply opinions but to advance knowledge not to encourage skepticism but to invigorate the search for truth that Mill advocates the submission of all matters to open dispute so long as any disagreement remains

His fundamental principle like that of Locke consists in divorcing political from logical criteria Logically the disputants may stand opposed to each other as one who knows and one who merely opines or as one who holds a true and one a false opinion or even as one who enjoys God s gift of supernatural faith and one who lacks such light but considered politically the opponents represent a conflict of opinion with each party equally deserving the benefit of the doubt that it may have the truth on its side If the state were to intervene it would be deciding a disputed question not by reason but by force in an area to which force is inapplicable

The business of laws Locke writes is not to provide for the truth of opinions but for the safety and security of the commonwealth and for every particular man s goods and person And so it ought to be For the truth certainly would do well enough if she were once left to shift for herself She is not taught by laws nor has she any need of force to procure her entrance into the minds of men Errors indeed prevail by the assistance of foreign and borrowed succours But if Truth makes not her way into the understanding by her own light she will be but the weaker for any borrowed force violence can add to her

Those who argue that state censorship is justified whether the matters whose debate is prohibited are speculative or practical moral

political or theological appear to extend the safeguarding of the common good beyond security from immediate peril of violence or to proceed upon the hypothesis of sufficient wisdom in the rulers to discriminate unerringly between truth and falsehood Those who distinguish between church and state with regard to censorship tend to limit the application of ecclesiastical authority to questions of faith and morals on which the church is supposed to have supernatural guidance in deciding what is true or sound

THE PRINCIPLE OF majority rule in matters of opinion seems to be opposite to the principle that the voice of a minority should be heard To settle a difference of opinion by taking a vote gives a decisive weight to numbers which it may be thought is as illegitimate as resolving a debate by force But when it is necessary to legislate or to act debate must be terminated and issues resolved

On speculative questions which may be answerable by knowledge rather than by opinion and with respect to which agreement may be possible the end of truth seems to be served by permitting discussion to go on as long as reason opposes reason But if the discussion is for the sake of determining action and if in addition the subject under discussion is strictly a matter of opinion concerning which it is possible for reasonable men perpetually to disagree then it may be necessary to appeal to some principle other than reason

Traditional political theory appears to offer only two solutions One principle of decision is to follow the opinion of a single man—an absolute monarch or an elected chief magistrate—whether or not that one man also has the wisdom commensurate with such responsibility The other principle is to accept the opinion of the majority According to Aristotle this second principle is operative in every form of government except absolute monarchy It is not only in democracy he says that the greater number are sovereign for in oligarchy and indeed in every government the majority rules It is characteristic of every form of constitutional stat they whatever seems good to the majo erests cold who share in the government be a God o authority

Considered in this way the principle of majority rule leaves open the question whether the majority should be a preponderance of the many or the few Should it be a democratic majority or according to some aristocratic standard the majority of the few who are wiser more expert or more virtuous than the many? With regard to some questions Aristotle suggests the multitude may be a better judge than any individual even the most expert If the people are not utterly degraded although individually they may be worse judges than those who have special knowledge as a body they are as good or better

The opposing claims of the greater number and the more competent as well as the possibility of combining the merits of both are discussed in the chapters on DEMOCRACY and ARISTOCRACY The problem of majority rule also appears in those chapters as a factor in the theory of representation especially the question considered by Mill—whether the representative shall exercise his own judgment or act on the opinion of the majority of his constituents.

Mill tries to separate those problems of government which should be submitted to representative assemblies and decision by majorities from those which should be solved by experts. But even on matters subject to deliberation by representatives of the people Mill advocates such measures as plural voting and minority representation to offset the sheer weight of numbers and prevent its being the decisive force in settling political differences and determining action

Such qualifications of the principle of majority rule do not seem necessary to those who hold Rousseau think that the general will is found by counting votes What Rousseau says of any individual opinion applies to minority opinions as well namely that when a contrary opinion prevails it proves that what the minority thought to be the general will was not so On the question of how large a majority should be decisive he thinks that the more grave and important the questions discussed the nearer should the opinion that is to prevail approach unanimity The more the matter in hand calls for speed the smaller the prescribed difference in the number of votes may be allowed to become

There is according to Rousseau only one political decision which requires unanimity and that is the decision to enter upon the social contract to set up popular government under which individual liberty endures as long as the qualities of the general will still reside in the majority When the principle of majority rule is unanimously adopted each individual agrees to substitute the general will for his own particular opinion

OUTLINE OF TOPICS

REFERENCΣS

To find the passages cited use the numb rs in heavy type which are the volume and pag number of the passages referred to For example in 4 Homer *Iliad* bk ii [265 283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the passage is in section d of page 12

Page Sections When the text is printed in one column the letters a and b refer to the upper and lower halves of the pa e For example in 53 J mes *Psychology* 116a 119b the passa begins in the upper half of p ge 116 and ends in the lower half of page 119 When the text is printed in t o columns the lette s a and b refer to the upper and lo er halves of the left hand side of the page the lette s c and d to the upper and lower halves of the right hand side of the page For example in 7 Γ l. to *Symposium* 163b-164c the passage begins in the lower half of the left hand side of page 163 and ends n the upper half of the right hand side of pa e 164

Author s Divisions One or more of the main divi ions of a work (such as part bk, ch sect) are sometimes included in the reference line numbers in brackets are given in certain cases *e g Il ad* bk ii [265 283] 12d

Bibl References The references re to book chapter and verse When the Kin James and Douay versi ns d fler in title of books or in the numbering of chapters or verses the King James ersion is cited first and the Douay nd cated by a *(D)* follo s *e g* Old Testament *Nehem ah* 7 45—*(D) II Esd as* 7 46

Symbols The abbre iat on esp alls the reader s attention to one or more especially relevant parts of a hole refere ce passim signifies that the topic is discussed intermittently rather than continuously in the work or passage cited

For add t onal information concerning the style of the references see the Explanation of Reference Style for general gu dance in the use of *The Great Ideas* consult the Preface

1 The different objects of knowledge and op nion being and becoming un ersal and pa ticul r the necessary and the cont ngent

7 Plato *C atyl s* 113c 114a c / *Pha d us* 125a 126c / *Republic* bk v 368c 373c e p 371a 373b k vi vii 383d 398 / *Tim eus* 447b d 450b c 457 d / *Thea tetus* 532 536b / *Soph st* 559c 561d / *Phil bu* 632d 635a

8 Aristotl *Pri r An lyt cs* bk i ch 13 [3 ^{b}4–23] 48b-d / *Posteri r An lytics* k i ch 2 [71^{b}8 16] 97d 98a h 33 121b 122a c / *Top cs* k iv ch i [12 ^{a}20– 6] 169a b [1^{b}1–4] 169c / *Met phys c* bk iv ch 6 [11^{b}3 7] 531b bk vii ch 15 [1039^{b}31 1040^{a}8] 563d 564a bk ix ch 10 [1051^{b}13 18] 577d

9 A istotle *Eth cs* bk i ch 3 [1094^{b}1 28] 339d 340 ch 7 [1098 25–^{b}8] 343d 344a k ii ch 2 [1111^{b}39 1112 13] 357d 358 bk vi ci 5 389a c ch 10 392b bk vii ch 3 396c 398a passim / *Rhetor c* bk i ch 25 [402^{b}13 1403 17] 652b-6 3a

11 Nico iachus *Ar thm tic* bk i 811a d

17 Plotinus *F f h E ead* tr ix ch 7 249b c

19 Aquinas *Summa* a 3 ans 297b 423d q 86 a 3 463b d a 4 ans 463d-464d part i ii q 17 a 6 ans 690b-d

20 Aquinas *Summa Theologica* part i ii q 6 a 3 ans 83b-84d p rt iii q 9 a 3 r p 2 765b 766b

31 Descartes *Rules* i iii 1a 5a vi 8a 10 / *D scou se* part iv 53c d / *Meditations* 72b d 74a c i ii 75a 78b iii 81d 82b v 93a d 95b 96a vi 96b 103d pass m / *Objections and Repl es* 123b 124d 125a 126a b 229d 230d 237b c

31 Spinoza *Ethics* part ii prop 10 376c 377 prop 27 31 384b 385c prop 40 schol 2 388 b prop 44 389b 390a

33 Pascal *P n é s* 234 216b

35 Locke *H man Understanding* bk iv ch x sect 1–3 365a d c i xvii sect 2 371d 372b

35 Hume *Human Understandi g* sect iv div 20–21 458a c div 30 462a

42 Kant *P re R ason* 228c d 240b 243c / *Fu nd P in Met physic of Mo ls* 285c 286a / *J dg me t* 601d 603d 604b

46 Hegel *Phil s phy of Right* pref 1a 7d intro par 1 9a par 31 19 20a p t ii par 132 46b 47a art i i par 316 104c additions 1 115a d

53 Ja i s *Psy hology* 660b 661a

2 The difference between the acts and sources of know ng and opining

7 PLATO *Symposi m* 163b / *Meno* 182c 183a 188b 189a / *Republic* BK V 370d 373c BK VI 383d 388a / *Timaeus* 447a b 450b-c 457c d / *Theaetetus* 536b-549d / *Sophist* 575d 577b

8 ARISTOTLE *Soul* BK III CH II [433^b32 434 11] 666d 667a

9 ARISTOTLE *Eth cs* BK VII CH . 3 395c 398a passim / *Rhetor c* 593a 675a c

17 PLOTINUS *F fth En ead* TR IX CH 7 249b-c

18 AUGU TINE *City f God* BK XI CH 7 326a c CH 9 339a b

19 AQUINAS *Summa Theologica* PART I Q 79 A 9 REP 4 422b-423d Q 83 A 1 ANS 436d 438a Q 108 A 7 REP 2 560b-561a PART I II Q 13 A 4 REP 2 675a c

20 AQUINAS *Summa Theologica* PART I II Q 51 A 3 14b-15a Q 67 A 3 ANS 83b-84d PART II II Q 1 AA 4-5 382c 384b Q 2 A 1 391a 392a

23 HOBB S *Leviathan* PART I 65b 66c

31 DESCARTES *Discourse* PART I 41b PART II 45a 46b-c PART III 48b-51b passim / *Medi tat ons* I 75a 77c / *Objections and Replies* 119c d 123b 124d 125a 167a b 226d

31 SPI OZA *Eth s* PART II PROP 40 SCHOL 2 388a b

32 MILTON *Areopa itica* 406a b

35 LOCK *H man Understand ng* BK I CH III SECT 23 25 119b-120d BK IV CH I SECT 2 307 CH XIV SECT 1 C I XV SECT 3 364b 365d CH XVII SECT 2 371d 372b

36 SWI T *Culliver* PART IV 165a b

42 KANT *Pu e Reason* 2b 4 c 194b c 202b-203c 228c d 240b 243c / *Judgem nt* 601d

46 H GEL *Philosophy of Right* PART II par 316 104

54 FREUD *New Introductory Lectures* 882a b

2a The influence of the emotions on the for m t on of opinion wishful th nking ration lization prejudice

6 THUCYD DES *Peloponnesi n War* BK II 402 404d BK III 427d-428a K IV 474a-c BK V 06b-c 507a c

7 PLATO *Republ c* BK III 339c d

9 AR STOTLE *Ethics* BK CH 3 [095 --9] 340a BK VI C I 5 [I 40 13 19] 389b-c BK VII CH 2 3 395 398a pass m CH 8 [1151 1 9] 401d 402 C I 9 [1151 8 b 6] 402b c / *P liti s* K II CH 16 [1287 2 ^{b}5] 48 c-486a / *Rh tor c* BK I, CH 1 [354 13 1355 3] 593b-594a CH 2 [1356 1 18] 595b c K II CH I 11 622b d 636a K III C I 7 659 660a H 14 [415^a25]-CH 15 [1416^b14] 668c 670c CH 16 [1417^a37 ^{b}7] 671 d CH 19 [419^b10- 7] 674c d

12 LUCR TIUS *Nat e of Th gs* BK IV [1141-1191] 59 d

18 AUGU TIN *Christ n Doctrin* BK II CH 36 653d BK IV CH 2 675d 676a CH 4 676d 677a

19 AQUINAS *Summ Theologica* PART I II Q 9 A 2 ANS and REP 2 658d-659c

20 AQ INAS *Summa Theologica* PART I II Q 77 AA 1 3 145a 148b

21 D NTE *Divine Comedy* PARADISE XIII [11 - 14] 126c d

22 CHAUCER *Troilus and Cressida* BK IV STANZA 29 92b

23 HOBBES *Leviathan* PART I 57d 58a 58c d 65b c 68d 78a c PART II 128c 129b c 154a PART III 166a

24 RABELAIS *Gargantua and Pant gruel* BK III 148d 150d 154a 156c 159d 163c 166a 168a 215c 218a

25 MONTAIGNE *Essays* 210b-212a 272d 276a 288a 290 404c-406 446d-450c 488b-489b 490d-491d

26 SH K SPEA E *Mer hant of Venice* ACT IV SC I [35-62] 425d-426a / *Julius Caesar* ACT III SC II 583c 586c

28 GILBERT *Loadstone* BK III 60c 61a

28 HARVEY *Mot n of the H a t* 268a c 274a 283b 285b c / *Circulation of the Blood* 306a c 309d / *On Animal Generati n* 364a 365a

30 BACON *Ad anceme t of Learn ng* 16 b 27a c 61b 65b c 79c 80a 90b-d / *Novum Orga um* BK I APH 41 109c d APH 49 111a

31 DESCARTES *Objections a d Replies* 215d 216a

31 SPINOZA *Ethics* PART I APPENDIX 369b 372d passim PART III PRO 39 SCHOL 408b-d PRO 51 DEMONST and SCHOL 411 -412a

32 MILTON *S ms n Ago stes* [599-605] 352b

33 PASCAL *Pensées* 82-87 186b 189a 100 191a 192b 105 193a 296 226b / *Geometrical Dem onstrat on* 4 9b-442a

35 LOCKE *Civil Go ernment* CH II SECT 13 28a b / *Human Understa di g* BK II CH XXI SECT 65-67 195b-196c CH XXX II 248b 251d pas sim esp SECT 7 18 249b 251c BK IV CH XIX 384c 388d CH XX SECT 12 392c

35 BERKELEY *Human Knowled e* SEC 75 427d

35 HU E *Human U der tand g* SECT I DIV 6 453c S CT X DIV 93 491d 492d

36 STERNE *Tr stram Shandy* 310a 311b

40 GIB O *Decl ne a d Fall* 296b c

42 KANT *Pu e Reason* 221 222b / *Judgement* 586 b

43 FED R LIST NU BE 1 29b 30c NUMB R 10 0a d NUM ER 31 103c 104a NUMB R 37 118 C NUMBER 49 159d 160a NUMB R 50 162a b

43 MILL *Liber y* 269c 270c / *Ut litar m* 455a

44 BO WE L *J h son* 103b c 106d

46 HEGE *Ph lo phy of Ri ht* PART III par 317 104d 105a

48 M LV LLE *M by Dick* 317 321

49 D RW N *De cent f Ma* 265d

50 MARX ENGELS *Co mu st Man fe o* 427 b

51 TOLSTOY *War a d Peace* K I 15b 16 K II 82d 83 BK II 134 -c 159b-160 K IV 170d 171 BK V 233b 234a K V 238a c 247a 248a K IX 358b 365 366d 367b K

3 Opinion knowledge and truth

3a Th truth of knowledge nd of r ght opin ion the r diff renc with e pect to man er of cquis t on stability and teach b lity

3b Certa n and p ob ble adequ te and in adequ t knowl dge degrees of certi tud mod s of assent

(3 *Opinion knowledge and truth 3b Certain and probable adequate and inadequate knowledge degrees of certitude modes of assent*)

19 AQUINAS *Summa Theologica* PART I Q 12 A 7 ANS and REP 2 56a 57b Q 14 A 13 ANS and REP 3 86d 88c Q 47 A I REP 3 256a 257b Q 57 A 3 ANS 297b 298a Q 58 A 7 R P 3 305c 306b Q 82 A 2 ANS 432d-433c Q 86 A 4 ANS 463d-464d PART I II Q 17 A 6 ANS 690b d
20 AQUIN S *Summa Theologica* P RT I II Q 51 A 3 14b 15a Q 67 A 3 ANS 83b 84d PART II II Q I AA 4-5 382c 384b Q 4 A 8 ANS 409a d PART III Q 9 A 3 REP 2 765b-766b
28 H RVEY *On An mal Generation* 333c d
30 BACON *Adva ceme t of Lea ni g* 27a c
31 DESCARTES *R iles* II 2a 3b III 3d-4a XII 22 b / *D sco rse* P RT II 49 b 49d 51a PART I 51b 52a 53c d / *Med tati s* 72b d 74a c I III 75a 82d V 95b-96a VI 96b 103d pass m / *Objections a d Repl es* 123b 125b 126 b I OSTUL TE I III 130d 131a POSTULATE VI VII 131c 152d 153c 226d 237b c
31 SPINOZA *Ethics* PART II DEF 4 373b PROP 27 31 384b 385c PROP 37 44 386b 390a ROP 49 SC IOL 391d 392a ART III ROP 17 SCHOL 401d 402a
33 PASCAL *Pensées* 233 241 213b 217b
35 LOCKE *Hum n U derst d ng* INTRO 93 95d pass m BK V C I I SE T 2 307a CH II SECT 14 31 b c III SECT 25 29 321 323a passim CH I ECT 3 12 324b 326d CH VI 331b 336d passim esp SECT 13 335c d CH XI S C 9 II 356d 357c CH XII SECT 6-14 360a 363a p s s m CH XIV XVI 364b 371c CH XVII SECT 2 371d 372b SECT 14 17 378c 379c C I X X SECT I 384c d
35 HU IE *Huma Understa ding* S CT V DIV 20 I 458 C DIV 30 462 SECT VI 469d [fn 1] S CT X DIV 86-91 488d 491c passim esp DIV 87 489b d
38 ROUSSE U *I q al ty* 348a c
39 S TH *W alth f Nat ons* BK V 335d 336a
42 KANT *Pure Rea o* 1 -4a c 14 15c 39c 41c esp 40d-41 194b-c 211 218d esp 217c d 228 d 230c 233d 240b 243c / *P act cal R ason* 330d 331a / *Judgement* 600d 603d
43 M LL *Liberty* 274b 293b passim
46 H EL *Philo phy of R ght* INTRO par 31 19 20a PART III par 318 105b ADD TIONS 91 131a d
54 FR UD *General Introduct* 463d / *Bey nd th Pl asur Pr ciple* 661c 662a

3c The skeptical reduct on of human judg ments to op n on

7 PL TO *Cratylu* 86a d 107d 109a / *Ph do* 236 238 / *Republ c* K VI 400 d / *Timaeus* 457c d / *Thea t t s* 517b 532a p ss m esp 517b c 522b 525a 526 531b 532a
8 ARISTOTLE *Posterior Analytics* BK I CH 3 [72b5 18] 99b / *Metaphysics* BK IV CH 5-6 528c 531c BK X CH I [1053 31 b3] 580a CH 6 [1057a7 11] 584b BK XI CH 6 [1062b12 1063b 14] 590d 592a
12 LUCRETIUS *Nature of Things* BK IV [469-477] 50b
12 EPICTETUS *Discourses* BK II CH 20 164c 166c
18 AUGUSTINE *Confessions* BK V par 19 32b-c / *City of God* BK XIX CH 18 523a b
19 AQUINAS *Summa Theologica* PART I Q 84 A I ANS 440d-442a
25 MONTAIGNE *Essays* 80b-82b 208a 294b esp 212c 215a 238c 246a 258c 261c 267c 268a, 271b-273b 276b-278a 285c 294b 308c d 318a 319b 439c-440a 497d 502c
30 B CON *Advancement of Lea ning* 57d 58b 95d 96a / *Nov im Organu I* BK I APH 67 115d 116a
31 DE CARTES *D scourse* PART II 46b-c / *Objections and Repl s* 272a 273a
33 PASCAL *Pensées* 385 238b 239a
35 BERKELEY *Hum Knowledge* I TRO SECT 3 405a c SECT 86-88 429c-430b
35 HUME *Human Under tand ng* SECT IV DIV 26 460b c SECT IV DIV 28 SECT V DIV 38 460d-466c SECT XII D V 60 477a-c SECT XI 503c 509d
42 K NT *Pure Reason* 224a 227a / *Practical Reason* 294c 295d 311d 313a
43 MILL *Liberty* 274b 293b passim
44 BOSWELL *Johnson* 121c d
46 HE L *Philosophy of Right* PREF 2c 6 7a RT III par 270 86b c
50 MARX ENGELS *Commu st Man festo* 428b-d
51 TOLSTOY *W ar and Peace* BK V 194a 195a
52 DOSTO VSKY *Brothers Karamazov* BK VI 168b c
54 FREUD *N w Introductory Lectures* 881d 882b

4 Opinion belief and faith

7 PLATO *Gorgias* 256b-c / *Republic* BK VI 386d 388a / *T maeus* 447b-d
8 ARISTOTLE *Soul* BK III CH 3 [428a20-b9] 660c d
18 AUGUSTINE *Confessions* BK VI par 6-8 36 37c / *C ty of God* BK XXII CH 4-5 58 b 590 / *Ch ist an Do trine* BK II CH 40 655b-656
19 AQUIN S *Summa Theologica* PART I Q I A 8 REP 2 7c 8d
20 AQUINAS *Summa Theol gica* PART I II Q 67 A 3 ANS 83b 84d ART I II Q I A 3 ANS and REP 3 381d 382c A 4 382c 383b Q 2 A I ANS 391 392a Q 4 A I ANS 402a-403d Q I A I 426d 427c Q 18 A 4 ANS 464c-465a P RT II Q 7 A 3 R P 3 747b 748
23 HO S *Leviathan* P RT I 65b 66c 78a b PART 165b 166a 238c 241a 242a P RT IV 248
25 MONTA GNE *E says* 80b 82a 98b-99a 150d

151a 208a 294b esp 209a c 238c 39c 250 b 259d 261a 267c 268a 271b 273b
30 BACON *Advancement of Learning* 27a c 95d 96a
31 DESCARTES *Meditations* 69b d / *Objections and Replies* 125c 126a 168b d
35 LOCKE *Human Understanding* BK IV CH XVIII 380d 384b
35 HUME *Human Understanding* SECT V DIV 38 40 466b-467c
42 KANT *Pure Reason* 240b 243c / *Practical Reason* 292a c 353a 354d / *Judgement* 599d 600 601d 607c esp 601d 602a 603a b 604d 606d 607d 609b
46 HEGEL *Philosophy of Right* PART III par 47 55d 56a / *Philosophy of History* PART I 349b 350b
48 MELVILLE *Moby Dick* 360b 361a
51 TOLSTOY *War and Peace* BK V 196a 198b
52 DOSTOEVSKY *Brothers Karamazov* BK I 11a b
53 JAMES *Psychology* 652a 654a

4a Comparison of supernatural or religious faith with science and opinion

NEW TESTAMENT *Hebrews* 11 1
18 AUGUSTINE *Confessions* BK I par 1 1a b BK VI par 6-8 36c 37c / *City of God* BK XIX CH 18 523 b BK XX CH 5 589b 590a CH 7 591 d / *Christian Doctrine* BK CH 7 638d 639 CH 40 655b-656a CH 42 656c d
19 AQUINAS *Summa Theologica* PART I Q AA 1 3b 4c A 5 REP 2 5c 6 A 6 6b 7a A 8 7c 8d Q A 13 REP 3 61 62b Q 32 A 1 REP 2 175d 178a Q 84 A 5 446c 447
20 AQUINAS *Summa Theologica* PART I Q 67 A 3 AN 83b 84d PART II Q 1 A 380b 381 AA 4-5 382c 384b Q A 1 391a 392a A 3 RE 3 392d 393 A 4 393c 394b A 9 398 399b Q 4 A 1 402a-403d A 8 409a d Q 8 A 8 422c-423b Q 9 A 1 ANS and RE 2 423c-424b
21 DANTE *Divine Comedy* PARADISE II [25 148] 108a 109b passim XX [88-93] 137c
23 HOBBES *Leviathan* PART I 65b 66c PART II 163a b PART III 165b PART IV 267a c
30 BACON *Advancement of Learning* 2 4c 41b d 55b d 95d 96 96 97c
31 DESCARTES *Meditations* 69b d / *Objections and Replies* 125 126a
32 MILTON *Paradise Lost* BK XI [55-587] 331a 332a
33 PASCAL *Provincial Letters* 147b 148b / *Pensées* 65 9 221b 225a 434 248a 250a 86 342b 343a / *Vacuum* 365b 366 / *Geometrical Demonstration* 440a b
35 LOCKE *Human Understanding* BK IV CH VI SECT 1 340b c CH I CT 357 d CH XVI SECT 13 4 371a c CH XV SECT 3-CH XVI SECT 1 380b 384b
35 HUME *Human Understanding* SECT XII DIV 32 509c

40 GIBBON *Decline and Fall* 200d 308b 309a
42 KANT *Judgement* 604d 606d
46 HEGEL *Philosophy of History* INTRO 158c 160b
51 TOLSTOY *War and Peace* BK V 196a 198b

4b Criticism of superstitious or dogmatic belief as opinion without foundation or warrant

6 HERODOTUS *History* BK I 12d 13b BK II 95c
6 THUCYDIDES *Peloponnesian War* BK I 353d 354b
12 AURELIUS *Meditations* BK I SECT 6 253b
14 PLUTARCH *Camillus* 114d 115a / *Alexander* 575d 576a
15 TACITUS *Histories* BK IV 274b
18 AUGUSTINE *Confessions* BK IV par 4-6 20a d BK II par 8 10 45d 47a / *City of God* BK IX 129a 322 passim esp BK V CH 1 7 207d 212c / *Christian Doctrine* BK I CH 21 24 647a 649a
19 AQUINAS *Summa Theologica* PART I Q 84 A 5 446 -447c Q 15 A 4 589d 590 Q 116 A 1 ANS 592d 593d PART II Q 9 A 5 REP 3 660d 662a
23 HOBBES *Leviathan* PART 51d 52b 56b d 68d 69b 79a b 79b 84c passim PART II 149d 151a c 163 b PART III 165d 166a 172a 177c esp 172b d 192c 195d PART IV 247a 267a 269b 271 272b c 274a c 276
25 MONTAIGNE *Essays* 37b- 80b 82b 500a d
28 HARVEY *On Animal Generation* 331b 332a 333 d
30 BACON *Advancement of Learning* 13a c 16 57d 58b / *Novum Organum* BK I APH 65 114b c APH 67 115d 116a A 1 74 118b A 1 89 124a d
31 DESCARTES *Objections and Replies* 125d 126a
31 SPINOZA *Ethics* PART III PROP 50 411b c
35 LOCKE *Toleration* 4d 5b 8d 9a / *Human Understanding* BK I CH III SECT 23 5 119b 120d BK IV CH XIX 384c 388d CH XX SECT 7 17 390d 394b passim
35 BERKELEY *Human Knowledge* SECT 54 55 423b c SECT 74-75 427c d SECT 124 437d 438a
35 HUME *Human Understanding* SECT I DIV 6 453c SECT XI DIV 107 499c 500b SECT XII DIV 132 509d
36 SWIFT *Gulliver* PART I 27b 28a
40 GIBBON *Decline and Fall* 189d 191a 200d 201b 308c 309d 465d 467a
41 GIBBON *Decline and Fall* 333b 334c
42 KANT *Pure Reason* 129c 130 187 188b 218d 222b esp 221 222b / *Judgement* 607d 608c
43 MILL *Liberty* 278a c
46 HEGEL *Philosophy of Right* PART I par 27 85b c 86a c ADDITION 16 143b 144c
48 MELVILLE *Moby Dick* 228b-229b
50 MARX *Capital* 36 d [fn 2]

(4 Opin on bels f and fa th 4b Crit c sm of superstitio s o dog natic bels f as op n on u tho it foundat on or warrant)

50 M rx Engels Commu st Manifesto 433c d
54 Fr ud New I troduct ry Lectures 874a 875a 877b 880b 881c 883d 884a

5 Freedom in the sphere of opinion

5a Rights and dut es with respect to the ex pression of opinion

5 Aeschylus Supplia t Maidens [365 401] 5c 6a
5 So hocles A tigo e [497–511] 135b c [683 745] 137a c
6 Herodotus H story bk i 44d 45a bk vii 239a c
6 Thucydides Pelopo esian W a bk ii 402b c
7 Plato Protagoras 43b c / Apology 200a 212a c / St tesman 601c 602c / Law s bk xii 789b 790a
12 Au lius Meditations bk i sect 6 253b sect 14 254b-c
13 Virgil Aeneid bk iv [173 197] 171b 172b
14 Plut rch Cato the You ger 632d 636b 637c
15 Tac tus Annals bk i 21b d bk iv 72b 73a
18 Au ustine City of God bk x ch 23 312d
21 D nte D i e Comedy parad e xiii [1 42] 126c d
22 Chaucer Troilus and C ess d bk ii stanza 41 48 59b 60b
25 Montaigne Essays 7a d 80b 82b 208b c 240c 242a 270a 271a 381a 388c pas im 446d-450c 497d 502c 521d 522a
26 Shak spe r 2nd Henry IV induction 467b d 468a
32 Mi ton A pag i ca 381a 412b esp 384b 390a
35 Lo k Toler i 1a 22d / Human Under t d g k v c i xvi s ct 4 367c 368b
36 S t G ll er part ii 75b
37 F ld ng T m Jones 223b d
38 Mont squ u Spi i f Laws bk xii 89 90 k xix 143a b
38 Rou eau I equal ty 326b / Soci l Cont ct k iv 425d
40 G on D cl a d Fall 231a 309c d
42 K nt Pu e R aso 220b 221b
43 D l ration o Ind end nce [1–6] 1
43 Cons itution of th U S am n ients i 17a
43 F d ral t nu i er i 29a 31
43 M ll L berty 272d 273 274b 293d 302d 312a pass m / R p es t t Government 370 389b p ss m 392b 399d passim 401 406a pass m
44 Boswell Johnso 221d 224a 300c 301a esp 301a d [fn 1] 402a c 512c d

46 Hegel Philosophy of R ght part iii par 270 89a b par 316–317 104c 105a par 319 105b-106c par 324 107a d additio s 185 149a
51 Tolstoy W ar and Peace bk v 233b 234a bk viii 307d 309c passim esp 308b bk ix 384c 388a c
54 Freud W ar and Death 757b

5b Ad antages and disad antages of freedom of discuss on

6 Herodotus History bk vii 216d 218a
6 Th ucydides Pelopo esian W ar bk ii 397b bk iii 425a d 427a c
7 P ato Protagoras 43b-c / Sta esman 601c 602c
15 Tacitus Annals bk iii 57a bk iv 72b 73a k xiv 153b-c
23 Hobbes Leviatha part ii 102d 103a 114d 115a 129b 130a 149b d 150c 151a 155d 156b part iv 274c d
25 Mont igne Essays 65a 66a 208b c 270a 271a 324c 326b esp 326a b 446d-450c
30 Bacon Novum Organum bk i aph 77 118d 119b / New Atlantis 214a b
31 De c rtes Discou se part vi 60d 61a / Obj t ns and Repl es 283c 284a
32 Milton A eopag i ca 381a-412b esp 384b-389a 398a b
35 Locke Toleration 4a 15b c 18c 21c / H man U dersta d ng bk iv ci iii sect 20 319b c
38 Montesqu u Spirit f Laws bk xii 89c 90 k xix 143a b 146a c
40 G bbon D l ne and Fall 309c d 669a 670d
41 Gibbon Decl ne a d Fall 161c 162b 334d 335a c
42 Kant Pu e Reason 220b 221b 223a c
43 Feder t nu b r i 29 31a number 10 49c 53a pass m
43 Mill L berty 274b 293b esp 274c 275 293b 294a 318 319b / Representative Gov e ment 361b 362c 410d 412
44 Bosw ll Joh son 221d 224a 300c 301a 512 d
46 Hegel Phil sophy f R ght p rt iii par 2 0 84d 89c passim par 314 315 104b c par 3 7 104d 105a / Ph losophy of H story pa t ii 279d 280b
51 Tolstoy W ar and P ace bk ix 384c 388a c
54 Freud W a and De th 757b

6 Op n on in the realm of morals

6a Good and e il s matters of opinion moral standards s customs or conventions re flecting pr alent opin on

5 Eu ides Ph oen ian Maidens [499–525] 382b c
5 Ar stoph n s Clouds [882 1 14] 499b 502b
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The more limited skepticism which treats philosophy as opinion in contrast to science *see* METAPHYSICS 4a PHILOSOPHY 6b SCIENCE 7a and for still another variety of skepticism which treats all moral or aesthetic judgments as matters of opinion *see* BEAUTY 5 CUSTOM AND CONVENTION 5a GOOD AND EVIL 6d RELATION 6c UNIVERSAL AND PARTICULAR 7b

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ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World* but relevant to the idea and topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collection

II Works by authors not represented in this collection

For the date place and other facts concerning the publication of the works cited consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*

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Chapter 65 OPPOSITION

INTRODUCTION

CERTAIN words in the vocabulary of com mon speech used at almost every turn of discourse indicate ideas so indispensable to hu man thou ht that they are often employed without analysis The word is is one of these si nifying the idea of being or existence The word not and the pair of words either or have the same character Taken together not and either or signify the idea of opposition The quality of redness is *not* the same as the quality of hotness yet this negative relation by itself does not mal e them opposite for something can be red hot It is only when a thing can have *either* one quality *or* another but *not* both that the qualities are said to be op posed Opposites are more than merely dis tinct they exclude one another

Opposition seems to be as pervasive as the familiar words which signify it Even if it were not itself one of the great ideas it would be man fest in all the other basic notions which come in ant thetical pairs *e g* good and evil life and death war and peace universal and particular pleasure and pain necessity and contingency same and other one and many virtue and vice Each of these notions eems to imply its opposite and to draw its meaning from the opposition There are other terms in tl e list of great ideas which though not paired in the same chapter stand oppo ed to one another art to nature chance to fate liberty to slavery time to eternity knowledge to opinion matter to form democracy to oligarchy and similarly other forms of government Still other terms cannot be discussed without reference to their oppos tes even though we have not explicitly l sted them such as being and non bein truth and falsity love and hate justice and injustice wealth and poverty

The enumeration mi ht extend to include every fundamental notion except for the in convenience in certain cases of not having read ily familiar names to designate the opposites In some instances moreover the opposition seems to involve more than a pair of terms as for ex ample is the case with poetry history and sci ence or physics mathematics and metaphysics

In the tradition of the great books we not only find the opposition of one idea to another but we also find opposite points of view conflicting theories or doctrines in the discussion of almost every basic topic under the heading of these ideas We find the same word used with contrary meanings the same propo sition affirmed and denied We find reasoning oppo ed to reasoning The same conclusion is reached from apparently opposite principles or opposite conclusions are drawn from premises apparently the same

But though opposition seems to be inherent in the realm of ideas and in the life of thought the idea of opposition is not itself explicitly thou ht about in many of the great books This does not mean that in the consideration of other matters the significance and consequences of opposition go unnoted On the contrary all the chapters dealin with the nature and con duct of man or with the institutions and h s tory of so iety give evidence of the general recognition—by poets and historians by cien tists and philosophers—that opposit on in the form of active confl ct characterizes the phe nomen The fact of warring opposites not only enters into descriptions of the way things are but also poses problems for psychologists mor alists economists and statesmen to solve

The study of nature as well as of m n a d society discovers opposition at the root of change The physics of antiquity for ex mple defines the elements or th bod ly humours in terms of contrary qual t es ac ording to Aris totle contra ies are among the

ciples of nature—the terms of change The cosmology of Lucretius makes the conflict of opposites the principle of growth and decay in the universe Destruction struggles against creativity life against death The death dealing motions the poet writes cannot keep the mastery always nor entomb existence for ever more nor on the other hand can the birth and increase giving motions of things preserve them always after they are born Thus the war of first beginnings waged from eternity is carried on with dubious issue now here now there the life bringing elements of things get the mastery and are overmastered in turn

Modern mechanics deals with action and reaction in the impact of bodies and the resolution of forces tending to produce opposite results The theory of evolution pictures the world of living organisms as engaged in the struggle for survival organism competing with organism or against an adverse environment for the means of subsistence or reproduction

These indications of the prevalence of conflict in the realm of thought itself or as a fundamental conception in man s thinking about nature and society do not alter the point that only in logic or metaphysics is opposition abstracted from special subject matters to become itself the object of thought Even so not all of the great speculative works develop an explicit theory of opposition—classifying its types analyzing its structure formulating it as a universal principle of being mind or spirit

Four authors especially treat opposition as a primary theme though not out of the context of such other notions as being relation one and many same and other or identity and difference They are Plato Aristotle Kant and Hegel It should not be surprising that the same authors are the principal figures in the chapter on DIALECTIC Their disagreement about the nature or meaning of dialectic has a parallel here in their conflicting theories of opposition

SOCRATES ARGUES in the *Protagoras* for the unity of virtue by using the principle that everything has one opposite and not more than one If wisdom is the opposite of folly and if it also appears that folly is opposed by temperance then either wisdom and temperance are the same or a thing may have more than one opposite Protagoras reluctantly accepts the first alternative he is apparently unwilling to re open the question concernin th pairing of opposites But the question is reopened by others It is one of the great problems in the theory of opposition relevant to the distinction of different kinds of opposites.

The problem can most readily be stated in terms of the logical processes of division and definition On the hypothesis that opposites always come in pairs every class can be divided into two sub classes which not only exclude each other but also exhaust the membership of the divided class. Such division is called dichotomy Many of the Platonic dialogues—notably the *Sophist* and the *Statesman*—exemplify the method of dichotomous division used as a device for constructing definitions. The object to be defined the character of the statesman or the sophist is finally caught in the net of classification when division after division having been made two sub classes are reached whi h leave no other possibilities open The thin is either one or the other

In the *Sophist* a preliminary exercise is undertaken in the method of division as preparation for the use of this method to define the sophist It will serve us here as an example of dichotomy All the arts are first divided into two kinds the productive and the acquisitive then the acquisitive arts are divided into those making voluntary exchanges and those which obtain goods by coercion the coercive divides into fi hting and hunting according to the alternatives of open or secret attack hunting into the hunting of the lifeless and the living hunting of the living into hunting of swimming or walking animals the hunting of swimming animals into the hunting of winged animals and the huntin of water animals the hunting of water animals into opposite methods of catching fish with further sub-divisions made until the art of angling can be defined as an acquisitive art wh ch being coercive is a form of hunting distinguished from other forms of hunting by the character of its object—animals which swim in water rather than air—and by the method used to catch them—hooks or barbs rather than nets or baskets

Aristotle objects to this process of division as a way of defining things Some writers he

says propose to reach the definitions of the ultimate forms of animal life by bipartite division But this method is often difficult and often impracticable For one thing it tends to associate or dissociate natural groups arbitrarily *e g* the classification of birds with water animals or of some birds with fish and some birds with land animals If such natural groups are not to be broken up the method of dichotomy cannot be employed for it necessarily involves such breaking up and dislocation

Aristotle also calls attention to the fact that the method of dichotomy often uses negative terms in order to make an exhaustive division into two and only two sub classes But the class which is formed by a negative characterization cannot be further sub-divided There can be no specific forms of a negation of featherless for instance or of footless as there are of feathered and of footed It is impossible Aristotle says, to get at the ultimate specific forms of animal life by bifurcate division He therefore proposes a method of defining by genus and difference accord ng to which it is possible in biological classificat on to sub-divide a genus into more than two spe ies To avoid sub division into two and only two that which differentiates each species from the others within the same genus must be some positive characteristic

As ALTERNATIVE methods of definition dichotomous division and the differentiation of species within a genus are discussed in the chapter on DEFINITION Here we are concerned with the problem of the number of opposites produced by the exhaustive division of a class or kind For example how many species of color are there? If the primary colors are more than two it would appear that each primary color has more than one opposite since the same object at the same time and in the same respect cannot be both red and yellow red and green green and yellow But Aristotle seems to restrict the notion of contrariety to pairs of opposite qualiti s Red yellow and such colors though qualities have no contraries he says Whether or not he would have rega ded them as contraries if he had been acquainted with the chromatic series of the spectrum remains a conjecture

To find a s ngle opposite for red it is necessary to employ the negative term not red But then another difficulty arises which Aristotle recognizes when he calls the negative term indefinite and which Kant discusses when he treats the infinity of the negative The not red includes more than other colors which are not red such as green and yellow It includes every thing in the universe colored or colorless which is *not* red *e g* happiness or atoms or poetry

Perfect dichotomy can be achieved by using positive and negative terms as opposites or what Aristotle sometimes calls contradictory terms —such as man and not man or just and not just But the class which is thus divided is absolutely indeterminate It is the universe everything the infinite It is necessary further more to distinguish between the opposition of just and not just and the opposition of just and unjust The term unjust is the contrary rather than the contradictory of just for these opposites apply only to men or laws or acts only certain kinds of things are either just or unjust and that is why it is said that contraries are always opposites within a genus or a definite kind In contrast not just is the contradictory rather than the contrary of just for these opposites apply to everything in the uni erse everything is either the kind of thing to which just and unjust apply or it is the kind of thing to which neither of these terms apply and so it is the not just

In addition to separating contraries (both of which are positive terms) from contradictory opposites (one of which is a positive the other a negative term) Aristotle distinguishes two sorts of contraries On the one hand such contraries as odd and even exhaustively divide a limited class (*e g* integral numbers) on the other hand such contraries as white and black represent the extremes of a continuous series of shades in which any degree of grayness can be cons dered as the opposite of either extreme or of a darker or a lighter gray

There are still other kinds of opposite pairs accord ng to Aristotle such as the terms double and half which have the peculiarity of implying each othe or the term blindnes and s ght which are opposite condit ons of the sam subject In this last case on of th opposites naturally belong to a certa n kind of

ays propose to reach the definitions of the ultimate forms of animal life by bipartite division But this method is often difficult and often impracticable For one thing it tends to associate or dissociate natural groups arbitrarily e g the classification of birds with water animals or of some birds with fish and some birds with land animals If such natural groups are not to be broken up the method of dichotomy cannot be employed for it necessarily involves such breaking up and dislocation

Aristotle also calls attention to the fact that the method of dichotomy often uses negative terms in order to make an exhaustive division into two and only two sub-classes But the class which is formed by a negative characterization cannot be further sub-divided There ~ uay no specific forms of a negation y and either for instance or of footless as for example All ered and of footed It is licted by Some men says to get at the ultimd in a merely contrary animal life by bifurcate d vhite The latter is a proposes a method of defin since it permits the ference according to whicl the truth of a third logical classification to subi are white and some more than two species To by a contradiction into two and only two that way each species from the otherists and God does genus must be some positivd a beginning and beginning consti

As ALTERNATIVE methods of o h there seems to omous division and the differe o make a differ ies within a genus are d scu great controver DEFINITION Here western thought to problem of the num te views which men d by the exhaustiv tal issues are genuine For example how everyone to take sides e? If the primar rely contrary positions would appear ve the inconsistency of than one op s us from agreeing with he same tim ispute but it does not re be both red th either for contrary doc d yellow pst the possibilities Between ion of con itions for example as that Red yux and nothing chan es both have no co true the truth may lie in he would b e elements of permanence he had been ange or it may be in the ries of the becom ng that lacks per of being that is free f om

sary to employ the negative term not red But then another difficulty arises which Aristotle recognizes when he calls the negative term indefinite and which Kant discusses when he treats the infinity of the negative The not red includes more than other colors which are not red such as green and yellow It includes every thing in the universe colored or colorless which is *not* red e g happiness or atoms or poetry

Perfect dichotomy can be achieved by using positive and negative terms as opposites or what Aristotle sometimes calls contradictory terms —such as man and not man must not the not just But the clas conclusion be false—or at absolutely it s be incapable of demonstration by propositions which are also necessarily true?

On both these questions Kant and Aristotle seem to be opposed According to Aristotle no truths are necessary or axiomatic unless their contradictories are self contradictory But Kant makes a distinction between analytical and synthetical propositions (discussed in the chapter on JUDGMENT) and in terms of it he restricts the principle of contradiction to serving as a criterion of truth for analytical judgments alone In an analytical judgement he writes whether negative or affirmative its truth can always be tested by the principle of contradiction But though we must admit Kant continues that the principle of contradiction is the general and altogether sufficient principle of all analytical knowledge beyond this its authority and utility as a sufficient criterion of truth must not be allowed to extend In the synthetical part of our knowledge we must no doubt take great care never to offend against that inviolable principle but we ought n ver to expect from it any help with regard to the truth of this kind of knowledge

The reason Kant explains is that in forming an analytical judgement I remain within a given concept while predicating something of it If what I predicate is affirmative I only predicate of that concept what is already contained in it if it is negative I only exclude from it the opposite of it For example if the mean ng of the concept whole involves being greater than a part self contrad ction r sult from denying that the wl ole is greater than a

In forming synthetical judgements on the contrary I have to go beyond a given concept in order to bring something together with it which is totally different from what is contained in it Here Kant declares we have neither the relation of identity nor of contradiction and nothing in the judgement itself by which we can discover its truth or its falsehood for example the judgment that everything which happens has a cause The truth of such synthetical judgments according to Kant is as necessary and as *a priori* as the truth of analytical judgments but the principle of contradiction does not provide their ground or validation

For Aristotle in contrast those propositions which do not derive necessity from the principle of contradiction belong to the sphere of opinion rather than to the domain of knowledge They can be asserted as probable only not as true or false In the domain of knowledge it is impossible to construct valid arguments for contradictory conclusions for if one must be true and the other false one can be validly demonstrated and the other cannot be demonstrated at all But in the sphere of opinion dialectical opposition is possible Because the contradictory of a probable statement is itself also probable probable arguments can be constructed on the opposite sides of every dialectical issue

For Kant dialectical issues do not consist in a conflict of opposed probabilities Far from setting probable reasoning against probable reasoning dialectical opposition consists in what appear to be *demonstrations* of contradictory propositions For example in that part of the *Critique of Pure Reason* devoted to the Transcendental Dialectic Kant presents opposed arguments which look like demonstrations of contradictory propositions—such as the thesis that the world has a beginning in time and its antithesis that the world has no beginning or the thesis that there exists an absolutely necessary being and its antithesis that there nowhere exists an absolutely necessary being These are two of the four issues which Kant calls the antinomies of a transcendental dialectic

Such issues Aristotle would agree with Kant do not belong to the sphere of opinion or probability But Kant would not agree with Aristotle that such issues belong to the domain of science or certain knowledge The problem of the world s beginning or eternity for example is one which Aristotle treats in his *Physics* and appears to think is solved by the demonstration that motion can have neither beginning nor end The problem of the existence of a necessary being is one which Aristotle treats in his *Metaphysics* and which he also appears to think is capable of a demonstrative solution For him therefore both are problems to which scientific answers can be given But for Kant the demonstration of the antitheses or contradictory propositions in both cases is as cogent as the demonstrations of the theses and therefore since we know that both of a pair of contradictory propositions cannot be validly demonstrated we must conclude that the arguments advanced are only counterfeit demonstrations or as Kant says illusory He calls these demonstrations dialectical and the issues they attempt to resolve antinomies precisely because he thinks the reasoning goes beyond the limits of scientific thought and because he thinks the issues are problems reason cannot ever solve

With respect to conclusions affirming or denying matters beyond experience the antinomies can be interpreted either as showing that contradictory arguments are equally sound or as showing that they are equally faulty On either interpretation Kant and Aristotle seem to be opposed on the applicability of the principle of contradiction to conflicting arguments and conclusions (except of course those which are merely probable) This difference between them accords with the difference in their conceptions of science and dialectic and in their theories of the scope and conditions of valid knowledge

THE OPPOSITION between Kant and Aristotle may not present the only alternatives Hegel s theory of the dialectical process seems to offer a third Where Aristotle appears to think that all contradictions must be resolved in favor of one of the opposites and where Kant appears to think that some contradictions cannot be resolved at all Hegel proposes the resolution of all contradictions not by a choice between

them but by a synthesis uniting the opposites and reconciling their differences

According to Aristotle opposites exclude one another in existence as well as in thought A thing cannot both exist and not exist at the same time nor in any particular respect can it simultaneously both be and not be of a certain sort Only with the passage of time and in the course of change can opposites be realized when a thing passes from being to non being or gives up one attribute in order to assume its contrary

The difference for Aristotle between becoming and being (or between change and complete actuality) seems to be that the one includes and the other excludes opposites Change cannot occur except as one opposite comes into existence *while* the other passes away But opposites cannot co exist with complete actuality So far as reality consists of co-existent actualities it is limited by the principle of contradiction—as a principle of being—to those which are not contradictory All possibilities cannot therefore be simultaneously realized for as Leibnitz states the principle all possibilities are not compossible

According to Hegel every finite phase of reality—everything except the Absolute Idea itself—has its contradictory as real as itself and co-existent with it Contradictories imply one another and require each other almost as correlative opposites do Whatever is partial and incomplete presupposes something which is partial and incomplete in an opposite respect The opposition between them can therefore be overcome by a synthesis which includes them both and which complements each by uniting it with the other

For example the category of being is opposed by non being These opposites both exclude and imply one another They are in a sense even identical with one another insofar as the notion of being contains the notion of non being and conversely the notion of non being the notion of being Except for the Absolute everything which is also is not and everything which is not also is The apparent contradiction involved in this simultaneous application of opposite categories to the same thing is overcome by a third category becoming which is the synthesis of being and non being Being and non being are united in becoming

This reconciling of opposites by their union in a more inclusive whole embracing both typifies the Hegelian dialectic of thesis antithesis and synthesis The motion repeats itself as the synthesis of one contradiction faces its own opposite and requires a higher synthesis to overcome the contradiction it has generated Thus every opposition in reality or thought is a phase in the progressive realization of the Absolute wherein all contradictions are resolved

In Hegel s *Philosophy of History* and in his theory of the development of the state in the *Philosophy of Right* the dialectical process is exemplified at every stage of progress The conflict of interdependent opposites—of opposite classes or forces in society of opposite political institutions or principles—calls for a resolution which shall unite rather than exclude the opposites

Considering the division of labor for example Hegel writes When men are dependent on one another and reciprocally related in their work and the satisfaction of their needs subjective self seeking turns into a contribution to the satisfaction of the needs of everyone else That is to say by a dialectical advance subjective self seeking turns into the mediation of the particular through the universal with the result that each man in earning producing and enjoying on his own account is *eo ipso* producing and earning for the enjoyment of everyone else The opposition between the particular good of each individual and the universal good of all is thus overcome by that advance in social organization which is the division of labor

Each of the stages of world history is according to Hegel the presence of a necessary moment in the Idea of the world mind But the world mind itself is a synthesis a resolution of the confli ting opposites—of the various national minds which are wholly restricted on account of their particularity Their deeds and destinies in their reciprocal relations to one another are the d alectic of the finitude of these minds and out of it arises the universal mind the mind of the vorld f ee from all restr ct ons producing itself as that wh ch exercises its right —and its right is the high st right of all—ov r these finit m nds in the h tory of tl e world which is the wo ld s court of judgment

OUTLINE OF TOPICS

REFERENCES

To find the passages c ted use the n mber in hea y type wh ch are the volume and page numbers of the passages referred to For example in 4 Ho er *Iliad* BK I [265- 83] 12d the number 4 is the number of the volume in the set the number 12d indicates that the pas sage is in section d of page 1

PAG SECTIONS When the text is printed in on column the letters a and b refer to the upper and l wer halves of the page For example in 53 JA IE P y h l gy 116a 119b the p sa e b gins in the upper l alf of page 116 and e d in the lo er half of pa e 119 When the t xt is p nted i t o column th l tters a and b refer to the upper and lo er halves of the left hand side of the p ge the letters c and d to the upper and lo er h lves of the ri ht ha d s de of th pa e For exampl in 7 P ATO *Symposium* 163b 164c the passa e begi s n the lo r half of the left hand side of page 63 and end in the upper half of the r ght hand side of page 164

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SYM BOLS The abbre iat on esp calls the read attention to one or mo e espec ally rel ant parts of a wh le reference passim n fies that the top c is d scussed inte mit tently rather than c ntinuously in the rk or passage cited

F r dd tional inform t on concerning the tyle of the r f e ces see the Explanation of Ref ence Style for general guidance n the use of *Th G e t Ideas* consult the Preface

1 Opposit on in log c

1a Kind of oppos t on among terms cor rel t on contrar ety p vation nega t on

7 PLATO *Prot goras* 49a 50b / *Pha do* 226d 227a 242d 245c / *Rep ibl c* BK V 351b c

8 ARIST TL *Cat go* CH 16d 19c / *P or A ly s* BK CH 46 70b 71d / *T pi* K I CH 8 159b 160a K V CH 4 [4 35 b34] 173 d K V H 6 187a 188c BK V CH 9 201 202a / *Metaphysics* K V CH 2 [4 9- 17] 523a b [0 4b27-1 2] 523d 524a K V CH I 539 BK X C I I [46 29-36] 571b CH 2 [1046b7 5] 571 d K X C I 4 [055 34 b 8] 582b-d BK XI C 3 [6 18- 8] 589b-c

19 AQU N S *Summ The lo c* PART I Q I A 4 103 104b RT I Q 18 A 8 REP I 699d 700b Q 36 A NS 780 781b

20 AQUINAS *Sum The l gic* PART I II Q 64 A 3 3 68b 69b Q 7 A 6 RE 110b 111b

23 HOB *Le athan* P RT I 57b-c

1b The an lys s of contr r ety the k nds of t ms wh ch can be cont ary contrariety with and without intermediates between extremes

7 PLATO *Lys s* 21b 22b / *E thydem s* 83d 84a / *Symp s m* 163b / *Republic* BK IV 350 351d BK V 372b 373

8 A TOTLE *Catego i s* CH 5 [3b24-31] 8a [4 b4] 8b d CH 6 [5b11-6 18] 10 C I 7 [6b 5 9] 11b CH 8 [b11 25] 15d H 10 [b I 25] 17a c CH 19 d / *Top* K II H 7 158b-159a BK IV H 3 [3b1 124 0] 171d 172 K V CH 6 [135b7- 6] 187 b K VI CH 9 [4a3 b 5] 201b d / *Metaphy s* K V 7 531c 532b BK V H 10 [10 8 5 b7] 5 9 b K X 3 0 581a 586d BK XI H 3 [06 18 28] 589b CH 6 [1063b19- 4] 592 c 12 [1068b26-31] 597d [069 I 5] 597d 598a

9 ARISTOTL *Ethic* K V I CH [55b8 5] 407a

17 P OTI U *S xth E d* TR I 0 292b 293

19 AQU N *S mm Th l g a* T Q 48 A R I 259b-260 P RT Q 8 A 8 REP 699d 700b Q 2 A R 721c 722c

(1 Opposition in logic 1b The analysis of contrariety the kinds of terms which can be contrary contrariety with and without intermediates between extremes)

20 AQUINAS Summa Theologica PART I II Q 64 A 3 REP 3 68b 69b
24 RABELAIS Gargantua and Pantagruel BK I 12d 13b
53 JAMES Psychology 387b

1c The exclusiveness of opposites as a principle of logical division

1c(1) Dichotomous division positive and negative terms

7 PLATO Phaedrus 134b c / Sophist 552b 561d 577c 579d / Statesman 580a 608d esp 595a d / Philebus 610d 613a
8 ARISTOTLE Prior Analytics BK I CH 3 64b 65a / Posterior Analytics BK II CH 5 125b d CH 13 [96b25-97b5] 132a 133a / Topics BK VI CH 6 [143b11 144 4] 197b c / Metaphysics BK VII CH 12 [1038 8 14] 561d
9 ARISTOTLE Parts of Animals BK I CH 2 3 165d 167d
17 PLOTINUS First Ennead TR II CH 4 11a c / Sixth Ennead TR III CH 8-10 285a 286d
42 KANT Pure Reason 43d-44a

1c(2) Division of a genus by differentia the contrariety of species

7 PLATO Theaetetus 548c 549d
8 ARISTOTLE Categories CH 3 [1b16-24] 5d CH 5 [3a22 b23] 7b-8a / Posterior Analytics BK II CH 13 [96b25-97b6] 132a 133a / Topics BK I CH 18 [108 38 b9] 152d [108b19 32] 153a c BK V CH 3 [123a20-124 9] 171c 172c CH 6 [127b7 17] 177a [128a20-30] 177d 178a BK VI CH 5-6 196b 199c / Physics BK I CH 3 [186b14-34] 261c 262a CH 5 [188 18 25] 263c CH 6 [189 1-14] 264c [189b23 27] 265b / Metaphysics BK III CH 3 [998b21 27] 517c BK V CH 10 [1018 38 b7] 539b CH 28 [1024 37 b9] 546b c BK VII CH 12 [1037b28 1038 34] 561c 562 BK VIII CH 3 [1043b24 1044 14] 568b d CH 6 569d 570d BK X CH 8-9 585b 586c / Soul BK I CH 1 [402b15-403 2] 631d 632a
9 ARISTOTLE Parts of Animals BK I CH 4 165d 168c
17 PLOTINUS Sixth Ennead TR III CH 1 281a b CH 8 285a 286d CH 18 291a d
19 AQUINAS Summa Theologica PART I Q 3 A 4 REP 1 16d 17c A 5 ANS 17 18b Q 4 A 2 REP 2 21b-22b Q 29 A 1 REP 3 162a 163b Q 47 A 257b 258c Q 48 A 3 REP 3 261b 262 Q 75 A 3 REP 1 380c 381b A 4 ANS 381b 382a Q 76 A 3 REP 4 391a 393a Q 77 A REP 7 399 401b PART I II Q 1 A 3 ANS 611b 612a Q 3 A 5 ANS 626b 627a Q 18 AA 5 10 697a 702a Q 29 A R 1 745c 746b Q 35 A 4 771d 775d A 8 ANS and REP 3 779c 780c
20 AQUINAS Summa Theologica PART I II Q 49 A 2 REP 3 2b 4a Q 52 A 1 ANS 15d 18 2 ANS 18a 19a Q 55 A 4 ANS and REP 1 2 28c 29d Q 61 A 1 REP 1 54d 55c Q 7 A 5 ANS 115a 116b A 7 ANS 117a 118a Q 95 A 4 5 229b 230c PART II II Q 21 A 3 REP 2 3 479c-480b PART III Q 2 A 1 ANS 710a-711c
42 KANT Pure Reason 193a 200c esp 197b-198a
53 JAMES Psychology 344b-345b

1d The opposition of propositions or judgments

1d(1) The square of opposition contradictories contraries subcontraries

8 ARISTOTLE Categories CH 10 [13b1 35] 19a c / Interpretation CH 6 26c d CH 10 29d 31c / Posterior Analytics BK I CH 2 [72 13] 98c
20 AQUINAS Summa Theologica PART I II Q 64 A 3 REP 3 68b 69b
42 KANT Pure Reason 64d 65c 156d 157b 174b d

1d( ) Modal opposition the necessary and the contingent

8 ARISTOTLE Interpretation CH 12 13 32d 35c
31 DESCARTES Rules XII 22a b
42 KANT Pure Reason 39c 41c esp 40d 41c 193a 200c esp 194b d
53 JAMES Psychology 851a 861b

1e Opposition in reasoning and proof the conflict of dialectical arguments the antinomies of a transcendental dialectic

7 PLATO Euthydemus 65a 84a c / Phaedrus 134b c / Phaedo 226d 227a / Republic BK IV 350c 351d BK VII 392b 393d / Parmenides 491a 511d / Theaetetus 525d 526b / Sophist 558b d 571d 574c / Statesman 594d 595d
8 ARISTOTLE Prior Analytics BK I CH 30 [46 3 10] 63d BK II CH 15 84b 85b / Topics BK I CH 11 148 c / Sophistical Refutations CH 9 234b d / Heavens BK I CH 10 [279b4 12] 370d / Metaphysics BK XIII CH 4 [1078 18 28] 610b
9 ARISTOTLE Politics BK V CH 8 [1307b26 29] 509d / Rhetoric BK I CH 1 [1355 28 39] 594c d BK II CH 23 [1397a6-18] 645 b [1399 18 28] 647d 648a
19 AQUINAS Summa Theologica PART I Q 89 A 5 ANS 477a-478b
20 AQUINAS Summa Theologica PART III Q 9 A 3 REP 2 765b 766b
25 MONTAIGNE Essays 446d-449d
31 DESCARTES Rules II 2c
35 LOCKE Human Understanding BK IV CH XVI SECT 9 369b-c

35 HUME *H man Understa ding* SECT X DIV 86-91 488d-491c
42 KANT *Pure Reason* 1a b 7a 8b 120c 173a esp 133c 174b 177b 187a 192d 200c 209d 219a 220b 229b c 231c 232a / *Fund Prin Metaphysic of Morals* 260d 261b 283d 284d / *Practical Reason* 291a 292 296a d 302a d 307d 308b 331c 337a c 340a 342d 348d 349a / *Science f Right* 407a 408b / *J dge ment* 540a 542a 562a 578a esp 562d 564c, 570b 572b 575b-578a 584c d
43 M LL *Liberty* 274b-293b passim
54 FREUD *General Introdu t* 545d

2 The metaphysical significance of oppos tion

2 Opposition as limiting coexistence non contrad ction as a pr nciple of being

7 PLATO *Ph edo* 244b-246c / *Republ c* BK IV 350d 351b / *Parmen d s* 504c d / *Sophist* 573a 574c
8 ARISTOTLE *Interpretat on* CH 13 [22b28 23 26] 34d 35c / *Metaphy cs* BK III CH [995b 6-] 514 CH 2 [996b26-997 15] 515b d BK IV CH 3-6 524b-531c CH 8 532b-d BK V CH 10 [1018a22 26] 539a BK IX CH 9 [1051 4] 577a b BK XI CH 1 [1059a23 6] 587a CH 5-6 590a 592b
19 AQUINAS *Summa Theol gica* PART I II Q I A 5 REP 3 613a 614a
20 AQUINAS *Summa Theolog a* PART I II Q 94 A 2 ANS 221d 223a Q I 3 A 7 REP 5 366a 367
31 S INOZA *Eth cs* PART III PROP 4-5 398d PRO 10 399c d PART V AXIOM 1 452
35 LOCKE *Human Understanding* K IV CH III SE T 15 316d 317a
42 K NT *Pu e Reas n* 99a 101b 107b c 179c 182b / *Pref Metaphys cal Eleme ts f Ethics* 367d 368a
53 JAMES *Psychology* 302a esp 302b [fn 1]

2b Oppos tes n the realm of be ng mind or spirit the one and the many the dialec t cal t iad of thes antithes s and syn th sis

7 PLATO *Pha d us* 134b c / *Phaedo* 244b 246c / *Republ* BK III 333b d BK V 368 373c BK V I 392b-394b / *Pa me de* 486a 511d / *Th t tus* 534d 536a / *Soph t* 561d 577b esp 574d 575a / *Phil bus* 610d-613a 615 617d 634b-635a
8 ARISTOTL *Interpret t on* CH 13 [22b3 23 8] 34d 35a / *Metaphy ics* BK IV CH 522b 524b BK V CH 6 [10 7 3 7] 537c BK X CH 3 O 581a 586d BK XI CH 3 589 d BK XII CH O [75a-5 33] 606a BK XIV CH 1 619b d 620d
11 NICOMACHUS *A ithm tic* BK 813d 814b K I 839d 840b
17 PL T NUS *Th d E n d* TR II CH 16 17 91b-92 TR I H I 93b-c TR V 119b 129a TR IX 136a 138a c / *Fifh En ad* 208a 251d esp TR I 208a 214c TR IV V 226d 235b / *S xth Ennead* TR VI CH 1-3 310d 312b TR IX CH I 2 353d 355a
19 AQ IN *Summa Theologica* PART I Q II A 2 47d 48d Q 17 A 4 103c 104b
31 DE CARTES *Discourse* P RT IV 51b 54b / *M d t tions* II 77d 81d VI 98c d / *Objections and Repl s* 115a c DEF V-VII 130b-c PROP IV 133c 152b d 155b 231a 232d
42 KANT *Pu e Reason* 7a 8b 43d 44a 99a 101b 107b-c 133c 173b 177b 197b 198a
46 HEGEL *Philosophy of Right* INTRO par 26 18b c par 31 19c 20a PART I par 39 21d par 97 37a PART II par 106 40a b par 9-111 41a c PART I p r 256 79d 80a par 353 36 112b 114a c esp pa 353 112b-c par 360 113d 114a c ADDITIONS 61 125d 126a 7 127b / *Ph losophy of H story* INTRO 156d 157b 160c 161a 165a b 205d 206a c PART I 235d 236a 237d 238c 245b-d PART II 250b-c 279 280b PART III 286c 287a 305c 306c PART IV 316a b 333d 334d
53 JAMES *Psychology* 107a b 117b 238b [fn 2]

2c Nonbeing as the opposite of be ng

7 PLATO *Republic* B V 371c 373 / *Parmen des* 507 511d / *Theaetetus* 518a / *Sophist* 561d 577b
8 ARISTOTL *Physics* BK I CH 5 [188 8- 5] 263c CH 9 [192 2 6] 268a BK V CH I [2 5 20-29] 305b / *M t physics* BK CH 4 [985b 3- 0] 503 CH 5 [986b25-987 1] 504d 505a K IV CH 2 [1003 33-b11] 522b [004b27-29] 523d BK VII CH 4 [1 30a25-26] 553a BK XI CH 2 [1069b27 34] 599a
17 P OT NUS *Fi st E nead* TR VIII 27b 34a / *S c d E n d* TR IV 50a 57 / *Third En d* R VI C I 6-7 109d 111c
18 AUGUSTINE *City of God* BK XII CH 2 343c d
19 AQUINAS *Summ Th logica* PART I Q 13 A 7 ANS 68d 70d Q 14 A 9 83b-d Q 6 A 3 REP 2 96b d A 5 REP 3 97c 98b Q 17 A 4 REP 2 103 104b Q 104 A 3 REP I 537b d
20 AQUINAS *Summa Th olo ica* PART I I Q 71 A 6 REP 1 110b 111b
31 D CARTES *M d t t ns* V 89c d / *Obj c t s a d Replies* 214d 215a

2d The oppos t on of good and e l in the world nd in r l tion to God

7 P ATO *R public* BK II 322a b / *Th aetet s* 518a b 530b 531a / *St tesman* 587a 589c
8 A ISTOTL *C e or s* CH 11 [3b36-14 6] 19c / *M t p/y* BK I CH 4 [984b33-985 9] 503a b BK IX CH 9 [105 17] 577 b K X H 10 [075 34 b7] 606a b K X V CH 4 [1091a29 9 8] 624a d
12 E IC TU *D scou s* K H 118d 120b CH 126 d CH 25 129d 131b CH 29 134d 138a

42 KANT *Pu e Rea on* 27a 6c 83b esp 76c d 91d 93c
46 HE EL *Ph lo phy of H sto y* INTRO 160c d 165a b 178a d 179b d

3b Contr riety of qual ty in the theory of the elements or humours

7 PLATO *Symposium* 155d 157a / *Timaeu* 462b-464b
8 ARISTOTLE *Phys cs* BK IV CH 9 [217a20- 6] 297a / *H a ens* BK II CH 3 [286a2 28] 377d / *Generat on and Corr pt on* BK II CH 1 3 428b d-431a CH 7 [334b8 30] 435d-436b / *M t phy cs* BK I CH 8 [989 18- 9] 507b c / *Sense and the Sensible* CH 2 7 674a 689a c pass m
9 ARISTOTLE *Parts of An mals* BK II CH 7 171c 179a BK III CH 7 [670b18 25] 199b BK IV CH 2 [677 3 b1] 206d 207b / *G n at on f An mals* BK IV CH I [65b8-766b25] 306d 308a
10 H POCRATES *Ancient Med cine* par 13 20 4 7d
10 GALEN *Natural Faculties* BK II CH 8-9 191b-199a,c
12 LUCRETIUS *Nature of Th ngs* BK V [380-4 5] 66a-c
19 AQUINAS *Summa The logica* PART I Q 66 A 2 ANS 345d 347b Q 91 A I AN and REP 3 484a-485b
28 HARVEY *On Anim l Generat on* 435b c
30 BACON *No um O ganum* BK I APH 66 114d 115a

3c The oppos t on of motion and rest and of contrary motions

7 PLATO *C atylu* 112b / *Republ c* BK IV 350d 351b / *Tm aeu* 453b c 460c d / *Soph t* 567a 574c / *Statesman* 587a 589c esp 587a b
8 ARISTOTLE *Categorie* 1 14 [15b1-16] 21b-c / *Phy ics* BK V CH 5-6 310a 312d / *Hea ns* BK I CH 4 362a c / *Metaphysic* BK IV CH 2 [1004b28 30] 523d BK XI CH 12 [1068b19-25] 597c d / *S ul* BK I CH 3 [406 22 27] 635c
10 GALEN *Natu al Facult s* BK I CI 2 167b-d
11 N COMACHUS *A thmet c* BK II 832c
16 CO ERNICUS *Revolut n of th H avenly Spher* BK I 517b-518a 519b 520b
16 KEPLER *Epit m* BK IV 931b
17 PLOTINUS *S xth Enn ad* TR II CH 24 295b CH 27 296b 297a
19 AQU NAS *Summa Th ol gica* PART I Q 10 A 4 REP 3 43b-44b Q 18 A I REP 2 104c 105c Q 53 A 3 ANS 283b 284d Q 73 A 2 ANS 371b-d PART I II Q 6 A I 644d 646a A 4 647b-648a Q 9 A 4 RE 2 660a d Q 41 A 3 799c 800b
20 AQUINAS *Summa Theol gica* PART III SUPPL Q 75 A 3 ANS and REP 3-5 938a 939d Q 84 A 3 RE 2 985d 989b
23 HOB E *Leviathan* PART I 50a
28 G LBERT *Loadston* BK 26a b BK VI 110b
30 BACON *Novu m O ganum* BK II APH 35 163a
31 SP NOZA *Eth cs* PART II AXIOM I 378c LE MA I 3 378c 379a
34 NEWTON *Pr nc pl* DEF III 5b LAW I 14a

3d The opposition of physical forces and its resolution

11 ARCHIM EDES *Equ l brium f Plan* BK I POSTULATES-PROP 7 502a 504b
16 KEPLER *Epitome* BK V 969a 972a
20 AQUINAS *Summa Th ol gica* PART III SUPPL Q 84 A 3 REP 2 3 985d 989b
28 G L ERT *Load tone* BK I 11b-12d BK II 38a 39b 52d 54d 59a d BK III 65a 67a
28 G LILEO *T o New Sciences* THIRD DAY 209a 210a 224d 225c FOURTH D Y 240a d 243d 249b pass m
34 NEWTON *Pr nci l* COROL I II 15a 16b BK I PROP 57-69 111b-130b
45 LAVOISIER *Elements of Chem stry* P RT I 9a 12d
45 FARADAY *Resea ch s n Electricity* 691b 692a 788c-793c 817a b
51 TOLSTOY *W ar and Peace* BK XII 570d EPILOGUE I 678a b
53 JAM S *P ychology* 105a

3e The struggle for existence the competit on of species

6 HERODOTUS *H tory* BK I I 112d 113b
7 PLATO *Pr tago as* 44c-45a
9 ARISTOTLE *H st ry of An mals* BK IX CH I [608b19]-CI 2 [610b20] 134a 136b
36 SW T *Gull er* PART I 79a 80a
38 ROUSSEAU *Inequal ty* 334b d 337d 348d 349d
39 SM TH *W alth of Nat n* BK I 34a
42 KANT *Judgement* 584d 585c
49 D RWIN *O gin of Sp ci* 7b 32a 39a c esp 32d 33b 36a 38a 49d 51d pas im 52d 53b 182d 233d 234a / *Des ent of Man* 328b-c 596c
54 FREUD *General Int oduct n* 573 592b / *C l at n and It D content* 791c d

4 Oppos tion or conflict in the psycholog cal nd moral order

4a The confl ct of reason nd the pas ons

5 EURIP DES *H pp lytu* [373 43] 228b d
7 PLATO *Pha dru* 120b c 128a 129c / *Phaedo* 224a 226 230d 234c / *Republic* BK IV 346a 355a p 350c 353d BK IX 416a c 425c-427b / *La s* BK VIII 735b 738b
8 ARI TOTLE *S ul* BK III CH 10 [433b5 1] 666b CH 11 [434 10-15] 666d 667a / *Mem y and Rem n n c* 2 [453a25 3] 695 d
9 ARISTOTLE *M t n f A mal* CH 39 d / *Eth* BK CH 13 [1 02b13 28] 348 BK I I CH [1 1 35 b4] 357b BK 7 395a-406a c / *Polit* BK CH 5 [286 17 0] 484b c [1286 33 37] 484d

33 PASCAL *Pensées* 411 242a
42 KANT *Fund Prin Metaphysic of Morals* 258b-c
46 HEGEL *Philosophy of Right* INTRO par 17 16c ADDITIONS 13 118c
47 GOETHE *Faust* PART I [354 429] 11a 12b [1064 1117] 26b 28a [1322 1706] 32b-41a [3217 3250] 79a b [3469-3501] 84b-85a
49 DARWIN *Descent of Man* 311a 314b passim esp 311a b 312d 313a 318c 319a
50 MARX *Capital* 293c 294a
51 TOLSTOY *War and Peace* BK III 120a BK VI 235a 238c 247d 249a 265d 266b BK VII 292b 296a BK VIII 338a 339c BK XII 560a 562d
52 DOSTOEVSKY *Brothers Karamazov* BK IV 95b 100c BK VII 200c 201c
53 JAMES *Psychology* 704b-706b 717a 718a 720b 729b 734b 735b
54 FREUD *Narcissism* 401b c / *Instincts* 414d 421a / *General Introduction* 590a 593b 615b 616c / *Beyond the Pleasure Principle* 640c 651d 654c esp 653c d 659b d 663c / *Group Psychology* 677c 678c / *Ego and Id* 708d 712a esp 709c 710c / *War and Death* 758b 766a b / *Civilization and Its Discontents* 789c 791d / *New Introductory Lectures* 846b 851d

4c Conflict as the cause of repression and as a factor in neurotic disorders

54 FREUD *Origin and Development of Psycho-Analysis* 6-9a 7-c 8a b / *Hysteria* 65c d 81d 84a esp 82c 117a / *Interpretation of Dreams* 370b 377b-382a esp 380a b 381d 382a / *Narcissism* 406d-407 / *Repression* 422a-427a c passim esp 424b-d / *General Introduction* 566a 569c esp 568d 569b 589c 591d 593d 594c 611 623b esp 614c 615 616b-c 623d 624d esp 624c d 626d-627b 633d 635 / *Beyond the Pleasure Principle* 640c d / *Group Psychology* 690a 691c esp 691a / *Ego and Id* 704d 712b 715a passim / *Inhibitions Symptoms and Anxiety* 718a 754a c passim esp 719b 720 722d 724b 725a, 726b 731c d 746 747b 750a-d

4d The conflict of loves and loyalties desires and duties

OLD TESTAMENT *Genesis* 4 1 16 2 1 12 / *Judges* 11 30-40 / *Ruth* 1 / *II Samuel* 11 13 —(D) *II Kings* 1 13 / *I Kings* 11 13— (D) *III Kings* 11 13
APOCRYPHA *Wisdom of Solomon* 9 5—(D) OT *Book of Wisdom* 9 15 / *Susanna* 19-24—(D) OT *Daniel* 13 9-24
NEW TESTAMENT *Matthew* 8.21 22 10 34 37 1 46-50 26 4 / *Mark* 14 38 / *Romans* 6 12 14 7-8 13 3-14 / *Galatians* 5 16-6 / *Philippians* 1.21 26 / *James* 1 17 4 1-2 / *I Peter* 2 11
4 HOMER *Iliad* BK VI [369-502] 43d-45a
5 AESCHYLUS *Seven Against Thebes* [1011 1084] 38b 39d / *Agamemnon* [184 247] 54a c / *Choephoroe* [885-930] 78d 79b
5 SOPHOCLES *Antigone* 131a 142d esp [1-99] 131a 132a [162 210] 132c d [441 470] 134d 135a / *Philoctetes* 182a 195a c esp [895-1292] 190a 193c
5 EURIPIDES *Hippolytus* [373 430] 228b d / *Phoenician Maidens* [1625-1746] 392b 393c
5 ARISTOPHANES *Lysistrata* 583a 599a c esp [706-780] 592b 593b [1072 1188] 596d 597d
6 HERODOTUS *History* BK VI 197a b 201d 202c BK VII 223c d
7 PLATO *Symposium* 153b 157a / *Laws* BK VIII 737a c
12 LUCRETIUS *Nature of Things* BK IV [1121-1140] 58d 59a
12 EPICTETUS *Discourses* BK IV CH 2 223d 224b
13 VIRGIL *Aeneid* BK IV [333-361] 176 177a
14 PLUTARCH *Poplicola* 77d 79c / *Fabius* 152b d / *Coriolanus* 189d 191c / *Timoleon* 196b 198b / *Agis* 654c 655a
17 PLOTINUS *Third Ennead* TR V CH I 100c 101c
20 AQUINAS *Summa Theologica* PART II II Q 24 A 12 499c 500d
21 DANTE *Divine Comedy* PURGATORY X [70-93] 68a b
22 CHAUCER *Troilus and Cressida* BK IV 83b 120 esp TANZA 76-92 98b 100b STANZA 2 3 229 117b 118b / *Franklin's Tale* 351b 366a esp [11 767 854] 363b-365a
23 HOBBES *Leviathan* PART III 240a 245c 246a c
25 MONTAIGNE *Essays* 200d 205b 381 388 467b-470a 486b 488b
26 SHAKESPEARE *Two Gentlemen of Verona* ACT II SC V [192 214] 238b SC VI 239a c ACT II SC I [4-21] 240 / *Love's Labour's Lost* ACT IV SC III 268b 272c / *Romeo and Juliet* 285a 319 c esp PROLOGUE 28 a b ACT II SC II [64 131] 303d 304c SC V 307a 309d / *Richard II* ACT V SC II [85 117] 347b-c SC III [3 146] 348a 349c / *Midsummer Night's Dream* ACT I SC I [2 127] 352d 353d / *Much Ado About Nothing* ACT II SC I [82 189] 509a b / *Julius Caesar* ACT I SC II [11-44] 583d 584a
27 SHAKESPEARE *Troilus and Cressida* 103 141a c esp ACT V SC I IV 126d 129d / *Othello* ACT I SC III [175 89] 210d 211 / *Macbeth* ACT I SC V [1 28] 289b / *Antony and Cleopatra* 311a 350d esp ACT I SC II [9 204] 313b 314c / *Coriolanus* ACT IV SC II-I I 377d 379a
29 CERVANTES *Don Quixote* PART I 120b 137d
30 BACON *Advancement of Learning* 24b
32 MILTON *Samson Agonistes* [843-870] 358a b [1003 7] 361b
33 PASCAL *Pensées* 4 193a
37 FIELDING *Tom Jones* 77 78b 79d 80b 126c 127c
42 KANT *Fund Prin Metaphysic of Morals* 259a

(4 *Opposition or conflict in the psycholog cal and moral o der 4d The confl ct of loves and loyalt es desir s and duties*)

48 MELVILLE *Moby D ck* 394a 397a
49 DARWIN *Descent of Man* 310d 314c 318d 319a
51 TOLSTOY *War and Peace* BK 7 273c 274a c BK VII 291a 292b 301b 302d BK III 327a 329c BK IX 365d 366a BK XI 490a-493d 520a 521b EPILOGUE I 669b c
52 DOSTOEVSKY *Brothers Karama v* BK III 58d 59a BK V 95b 100a BK X 282b-283c EPILOGUE 402a-404c
53 J MES *Psychol gy* 199b 201b 293b 791a 798b pass m 824a b
54 FREU *G eral Int oduction* 452c d 467b-476 c passim esp 472d-475a / *Gr up Psychol ogy* 694c 695b / *War and Death* 757c 759d 764d 766d / *C il tion and Its Discontents* 780d 781d 783c 789b esp 783c 784d 788d 789a 792a 802a c passim / *New Introductory Lectures* 853a b

4e Conflict in hum n life opposed types of men and modes of l fe

OLD TESTAMENT *Genesis* 4 1 8 25 27 / *I K gs* 8 53—(D) *III King* 8 53 / *Jerem ah* 12 1 3—(D) *Jeremias* 12 1 3
APOCRYPHA *Ec les astic s* 33 10-15 esp 33 14—(D) OT *Eccles asticus* 33 0-15 esp 33 15
NEW TESTAMENT *Matthew* 5 7 25 / *Mark* 4 1 20 / *L ke* 8 4 15 / *Acts* 6 19-23 / *Romans* 6 12 14 7 8 13 13 14 / *Eph sians* / *I Th ssalonia* 3 11 4 12—(D) *I Thes salon ans* 3 11-4 11 / *I Tim thy* 5 5-6 / *II Timothy* 3 / *Hebrews* 11 24 26 / *I Peter* 2 1 5 11 esp 3 12
4 HOMER *Iliad* BK III [19 224] 20d 21b
5 EURIPIDES *Ion* [585 647] 287d 288b / *H p polyt s* 225a 236d
5 ARISTOPH N S *Cl ds* [882 114] 499b 502b
6 HERODOTUS *H story* BK VII 232d 233d 253b 254a BK VII 264 K IX 305d 306a
6 THUCYDIDES *Pelopo es n War* BK I 366b 367a BK I 396d 397a
7 PLATO *Ph edo* 223d 225a / *Republ c* K I 308b 309b BK II 340b 341a BK VIII IX 401d-427b / *The etetus* 528 531a / *States ma* 605d 608d / *Ph lebus* 609a 639a / *Laws* BK V 690a-c / *Seventh Letter* 806a 806d
9 ARISTOTLE *Et cs* BK I CH 5 340d 341b BK II CH 3 350a c K VII CH 14 [154b 0-30] 406 BK X 1 7-8 431d 434a / *Rhetoric* BK II CH 12 17 636a 639a
10 H POCR T S *A s Wate s Pla es* par 12 24 14b-19a c
12 LUCRETIUS *N tu e f Th ngs* K II [-61] 15a d BK I [59 86] 30d 31b [830- 94] 40c 44 c BK V [11 5 1135] 75c d BK VI [1 41] 80 d
12 EPICT TUS *Disco se* BK I CH 3 108b-c CH 29 134d 138a BK I CH 11 150a 151b BK III CH 10 185d 187a CH 15 190a 191a CH 22 195a 201a BK IV CH 6 230b 232 CH 8 235b 237d
13 VIRGIL *Aeneid* BK IX [590-6 0] 293a b
14 PLUTARCH *Themistocles* 99b-c / *Marcellus* 254c 256b / *Demet ius* 726a d
17 PLOTINUS *First Ennead* TR III CH I 3 10a 11a / *Fo rth Ennead* TR IV CH 18 166d 16 b / *Fifth Ennead* TR IX CH I 2 246c 247b
18 AUGUSTINE *Confessions* BK X par 39 81b-c / *Christian Doctrine* BK III CH 14 663c-d
19 AQUINAS *Summa Theologica* PART I Q 9- 488d-491d Q 93 A 4 REP I 494c-495b Q 96 AA 3 4 512a 513c Q 99 A 2 520a-d Q 11 A I REP 3 571d 573a Q 113 A 2 REP 3 5 6d 577d Q 115 A 3 REP 4 588c 589c P RT I-II, Q 8 A I REP I 2 655b 656a Q 19 A 10 A S and REP TO CONTRARY 3 710b 711d Q 46 5 ANS and REP I 815d 816d
20 AQUINAS *Summa Theologica* PART II-II Q 2- A 7 506a d Q 29 A 3 REP 2 531d 532c QQ 37 42 570c 584d Q 1/9 606a-607c P RT III SUPPL, Q 81 A 3 966a-c Q 82 A 3 REP 4 971a 972d Q 96 A 11 1063d 1064d
22 CHAUCER *Prolog e* 159a 174a / *Tale of Mel ibeus* par 30-31 413b-414a
23 MACHIAVELLI *Prince* CH XVIII 25a b
23 HOBBES *Leviathan* PART I 66d-67a 84c d PART II 154a 155d CONCLUSION, 279a-c
24 RABELAIS *Gargan ua and Pantagruel* BK I 62b 63c BK III 189c 191a
25 MONTAIGNE *Essays* 43d-47a 91d 98b esp 93b 94a 103c 104a 150c 151a 159a 162c 167a 169a 200d 205b 235a 236a 278a 279c 281a 284c 318a 319b 326b 32 d 406a-408b 445a c 446a 450a 458b-c 492b-493a 524b d 528c 529b
26 SHAKESPEARE *Love s Labour s Lost* ACT I SC I [I 162] 254a 256a / *Midsummer N ght s Dr am* ACT I SC I [67 78] 353a b / *Merchant of Venice* 406a-433d esp ACT I SC I [4 -94] 406d-407b SC III 409c-411b ACT III SC I [6] 419a b / *Ist Henry IV* 434a-466d esp ACT I, SC III 437d-440d / *2nd Henry IV* 467a 502d esp ACT IV SC IV V 492d-496d / *Much Ado Abo t Nothing* ACT I SC III [I 41] 506d 507a ACT II SC I [345 363] 510d / *J lius Caesar* ACT I SC II 569b 572c / *As You Like It* ACT I SC I [20] 603c d ACT IV SC I [I 41] 617 c
27 SHAKESPEARE *Twelfth N ght* ACT II S II IV 8c 11d / *H mlet* 29a 72a c esp ACT II SC I [575-616] 46b c ACT III SC I [56-90] 47c d SC II [58 79] 49c d [360 389] 52d 53 A I IV SC IV [32-66] 59a c / *Troilus a d Cres da* 103a 141a c esp ACT I SC I I [17-54] 108b c ACT II SC I II 112b 115d / *Othello* ACT I SC III 208d 213a / *A ony and Cleopatra* 311a 350d esp ACT I SC IV 315d 316d / *Co iolanus* ACT IV SC VII [27-57] 384c d / *Tim n of Athens* ACT I SC I [175 293] 395c 396d ACT IV SC III [197 398] 413 415a
29 CERVANT S *Don Quixote* P RT I 49c 50b 113b 115d 145b 147d PART II 228a d

30 BACON *Advancement of Learning* 18a b 20c d 69d 76a passim 76d 77c / *Novum Organum* BK I APH 42 109d APH 53-58 111c 112b
31 SPINOZA *Ethics* PART III IV 395a-450d passim
32 MILTON *Paradise Lost* BK II [496-505] 122a
33 PASCAL *Pensées* 125-183 195b 204b
36 SWIFT *Gulliver* PART I 21b 23
38 ROUSSEAU *Social Contract* BK III 416c 417a
40 GIBBON *Decline and Fall* 89d 191c 194a 398d 399a 409d-410a 593b d 599a passim 632b 633d
43 MILL *Liberty* 290a 291d 293b 302c 303d 306c passim / *Representative Government* 346 348c
46 HEGEL *Philosophy of Right* PART I par 39 21d PART II par 139 48d-49b PART III par 256 79d 80a ADDITIONS 28 129 137b c / *Philosophy of History* INTRO 192a 194a PART I 232d 233a PART II 276d 277a 280b 281b PART III 289d PART IV 318c 319b
47 GOETHE *Faust* PRELUDE [33] PART I [4 ?] 2a 12b PART I [522-601] 15a 16b [1064 1117] 26b 28 [3217 3 5] 79a b [3469-3501] 84b 85a PART II [? 99-5 90] 128b 130b
48 MELVILLE *Moby Dick* esp 39b 40a 79a 82a 83 91a 122b 125a 285d 288a 303a 317a 321a 370b 371b 394a 397a
49 DARWIN *Descent of Man* 318d 319a
50 MARX ENGELS *Communist Manifesto* 415a 434d passim
51 TOLSTOY *War and Peace* BK I 15a b BK III 131c 135 BK V 238c 243d 244b c 249a 260 ?02 BK VI 284c 285a BK VIII ?03d 304b 336b 337d BK IX 358b 365c passim esp ?62d 363 BK X 403 -406 426a-430b BK XI 480a-482b 515c 521c BK XI 577a 578b BK XI 605b d BK XV 630 631a
52 DOSTOEVSKY *Brothers Karamazov* ep BK I-IV 1a 88a BK VI 146b d 170d BK XI 337a 346
53 JAMES *Psychology* 199b 204b 800a 807b
54 FREUD *Interpretation of Dreams* 246c 247c / *General Introduction* 501d 504b 616b c / *Beyond the Pleasure Principle* 640b d / *Group Psychology* 689d 690 / *Ego and Id* 697a 717a / *Inhibitions Symptoms and Anxiety* 746c 747 / *Civilization and Its Discontents* 771 802a esp 772 c 776b 777a 780d 781d 783c 784 787a 789a 790a 791d 796a 799a 802a c / *New Introductory Lectures* 830a 853b esp 830b 832c 837b 839b 849d 853b

5 Conflict in society and history

5a Competition in commerce and the rivalry of factions in politics

6 THUCYDIDES *Peloponnesian War* BK II 434c-438b BK IV 458d-459c BK V 502d 504b BK VIII 564 593 passim esp 568d 569a 57?c 576 577b d 579 583 584b 585 585d 586b 587a 590c
9 ARISTOTLE *Ethics* BK IX CH 6 420c-421a / *Politics* BK V CH 9 [1309^{b}14 1310 1] 511d 512b / *Athenian Constitution* CH 5 554d 555a CH 8 par 5 556c
14 PLUTARCH *Solon* 68d 75 d / *Pericles* 126c d / *Agesilaus* 482a c / *Pompey* 521c d
15 TACITUS *Annals* BK VI 97b c / *Histories* BK II 224d 225a
23 MACHIAVELLI *Prince* CH IX 14c d
23 HOBBES *Leviathan* PART II 103d 104a 121b d 148d 149b 150b 151a 152b d
25 MONTAIGNE *Essays* 42a b
26 SHAKESPEARE *1st Henry VI* 1a 32a / *2nd Henry VI* 33a 68d / *3rd Henry VI* 69a 104d / *Richard III* 105a 148a c esp ACT V SC V [? 41] 148a c / *Richard II* 320a 351d / *1st Henry IV* 434a-466d / *2nd Henry IV* 467a 502d
27 SHAKESPEARE *Troilus and Cressida* ACT I SC I [?5-137] 108d 109c
38 MONTESQUIEU *Spirit of Laws* BK ?I 9d BK XIX 142b 143a BK XX 148d 149a
39 SMITH *Wealth of Nations* BK ? 23c 27b esp 25 26c 42a c 51a 62a BK II 142c d BK IV 192 201d esp 193 194b 201b d 225d 228a 269d 271a BK V 420c d
40 GIBBON *Decline and Fall* 652b 655c
41 GIBBON *Decline and Fall* 572c d
43 FEDERALIST NUMBER 7 42d 43 NUMBER 10 49 51b NUMBER 43 141d 142d NUMBER 50-51 161d 165a passim NUMBER 60 185b 187a NUMBER ?0 212b
43 MILL *Liberty* 289c d 312b 313a / *Representative Government* 361b 362b 366a 370a 371c 372a 376a c 412b 413
44 BOSWELL *Johnson* 124d 125d
46 HEGEL *Philosophy of Right* PART I par 289 97b d par 304 102a / *Philosophy of History* PART ? 275b d 279b 283b c PART II 285d 298c d PART IV 336a c 356c 357a 366d 367a
50 MARX *Capital* 130c 171d 176a esp 174b-c 270 271c passim 308d 311a esp 310b 316d 317 ? 371 377a passim esp 372c 379 383d
50 MARX ENGELS *Communist Manifesto* 425b

5b The class war: the opposition of the rich and the poor, the propertied and the propertyless, capital and labor, producers and consumers

5 EURIPIDES *Suppliants* [?9-45] 260b c
6 HERODOTUS *History* BK VI 203a b BK II 243b
6 THUCYDIDES *Peloponnesian War* BK ? 423a c 434 -438 BK IV 458d 459 463a 465 467a b 480 BK V 482d-483 502d 504b BK VI 520a d 524d 525d 533a BK VIII 564 593 passim esp 568d 569 575 576 577b d 579 583 584b 585a 585d 586b 587 590
7 PLATO *Republic* BK IV 343c d BK VIII 405c-416a

236a PART II 260b c 274a 275a 279c 281b PART IV 316a b 321b d 333d 334d 346a c
49 DARWIN *D scent of Man* 320b 323a passim 328b c 350d 351b 596c
50 MARX *Cap tal* 377c 378d
50 MARX ENGELS *Commun st Man festo* 415a 434d esp 419b d-425b
51 TOLSTOY *W a and Peace* BK IX 342a 344b EPILOGUE I 646b-c
53 JAMES *Psychology* 717a b
54 FREUD *General Introd ction* 545d / *Beyond the Pleasu e Principle* 654a-c / *Civil at on and Its Discontents* 787a 788d 802a c / *New In troductory Lectu es* 882c 884c

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For Other considerations of the opposition of terms and propositions or of opposition in reason ing and argument *see* DIALECTIC 3b-3d IDEA 4c JUDGMENT 7a NECESSITY AND CON TINGENCY 4e(1) REASONING 5c SAME AND OTHER 3a(2)

The distinction between dichotomous division and the differentiation of a genus as methods of definition *see* DEFINITION 2a-2b

D scuss ons of the law of contradiction as a principle of thought and of being *see* LOGIC 1a METAPHYSICS 3c PRINCIPLE 1c TRUTH 3c and for the various ways in which dialectic is concerned with opposition *see* DIALECTIC 3a-3d

The opposition of being and nonbeing one and many same and other *see* BEING 1 DIA LECTIC 3a ONE AND MANY 1a 1c SAME AND OTHER 2c UNIVERSAL AND PARTICULAR 1

The theory of synthesis or the reconciliation of opposites *see* DIALECTIC 3d HISTORY 4a(3) IDEA 1f LIBERTY 6a MIND 1f 10f-10f(2) PROGRESS 1a STATE 2a(3)

The role of opposition in nature *see* CHANGE 2b 4 ELEMENT 3b EVOLUTION 5a MECHANICS 6d(3) QUALITY 4a-4b

Conflict in human nature and the life of man *see* DESIRE 3d 4a DUTY 6 8 EMOTION 4a LOVE 3c MAN 5-5a MIND 9b ONE AND MANY 3b(5) and for conflict in society and history *see* DEMOCRACY 5b(4) LABOR 7c-7c(1) NECESSITY AND CONTINGENCY 5d PROGRESS 1a REVOLUTION 5a STATE 5d-5d(2) WAR AND PEACE 2c 7 WEALTH 4f

ADDITIONAL READINGS

L sted b low are works not included in *G at Bo k of the We ern W o ld* but relevant to the idea and topics with which th s chapte deal Thes wo ks are di ded nto two groups

I Wo ks by authors represented in this colle tion
II Wo ks by authors not rep esented in th s colle tion

For the date place and othe facts con erning the publ cation of the works cited consult the B bl og aphy of Add tional Reading wh ch f llows the last h pter of *Th G at Id as*

I

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—— *Log c* CH 8 par 115-122
MARX *The P erty of Ph lo ophy*

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DEWEY *Log c the Theory of Inqu ry* CH I
B RUS ELL *Int duct to Mat ema ical Ph los phy* CH 14
—— *An Inqu ry nto M an ng and Truth* CH 20

Chapter 66 PHILOSOPHY

INTRODUCTION

THE difficulties which attend the consideration of any great idea—by philosophers or others—appear with peculiar force in the traditional discussion of philosophy itself The word philosophy not only varies in its descriptive significance now designating one part of learning now another and sometimes even an attitude of mind or a way of life but it also varies as a term of evaluation It is seldom used without expressing either praise or dispraise of the methods and accomplishments of philosophy or of the calling and character of the philosopher

On the descriptive side the meaning of the word ranges from a conception of philosophy which covers *all* branches of scientific knowledge and which contrasts philosophy with poetry history and religion to a conception of philosophy in which the primary point is its contrast to science and its association with poetry and religion as works of vision speculation or belief rather than of knowledge

On its evaluative side the word philosophy sometimes eulogizes the love and search for truth the pursuit and even the attainment of wisdom At the other extreme it derogates vain learning idle disputation and the dogmatism of unsupported opinion At one time the good name of the philosopher stands in contrast to the questionable reputation of the sophist At another philosopher carries almost the same invidious connotation as sophist The dismissal of philosophy as useless or at best ornamental in the practical affairs of society is sharply opposed to the vision of an ideal state which can come to pass only if philosophers are kings or kings philosophers

THESE SHIFTS IN the meaning of the words philosophy and philosopher record crises in the history of western thought They reflect the characteristic formations of our culture in its major epochs

The great books of antiquity for example seem to give no intimation of a division between science and philosophy Particular bodies of knowledge such as physics or mathematics are indifferently regarded as sciences or branches of philosophy The crown of knowledge is wisdom approached as one rises in the hierarchy of knowledge to the highest science or the first philosophy Aristotle and Plato may disagree in naming or defining the type of knowledge which deserves to be called wisdom yet for both it is the ultimate attainment of philosophical inquiry or scientific work

The differences between Plato and Aristotle discussed in the chapters on DIALECTIC and METAPHYSICS—the one using dialectic as the name for the supreme form of knowledge the other using theology to name the summit of the sciences—do not affect their agreement that the philosopher is a man of knowledge not opinion and that his ultimate goal is wisdom

If there is any distinction in antiquity between science and philosophy it seems to find expression in the sense in which Socrates speaks of philosophy as the love of wisdom implying thereby its pursuit rather than its attainment A man would not be called a scientist in a particular field—mathematics let us say—unless he actually had some mathematical knowledge but a man who is not actually wise can be called a philosopher by virtue of his effort to become wise Apart from this point of distinction the Greeks tend to identify philosophy with the fundamental sciences which somehow yield speculative or practical wisdom

Considering the whole of human learning all its arts and disciplines we see that the things the ancients distinguish from philosophy are poetry history and the particular productive

arts or crafts Here again Plato and Aristotle do not make the distinction in the same terms Plato compares the poet unfavorably with the philosopher in the *Republic* The poet is an imitator of imitations and moves on the level of images and beliefs whereas the philosopher rises above the imagination to the level of ideas which are the only true objects of knowledge Aristotle on the other hand seems to pay poetry a compliment when in the *Poetics* he says that it is more philosophical than history because it deals with the universal rather than the particular These attitudes toward poetry in relation to philosophy are somewhat reversed by the fact that for Plato myth and poetry provide materials from which philosophical insights can sometimes be distilled whereas for Aristotle sense *experience is the source from which by* induction the principles or axioms of philosophical knowledge are obtained Despite these differences their accord on the supremacy of the philosopher remains unaffected

More than poetry and history—and all the knowledge that can be applied productively—philosophy represents the highest use of man s faculties On this Aristotle and Plato seem to be agreed even though Aristotle distinguishes the philosophical from the political life and assigns the most perfect happiness to the contemplative activity of the philosopher whereas Plato—in the *Republic* at least—brings the philosopher back to the shadows of the cave after he has seen the light of truth itself so that he can put his wisdom to practice in the government of his less fortunate fellow man

THE PRACTICE OF philosophy seems to become for the Roman writers more important than the content of philosophy as a body of doctrine What is that wh ch is able to conduct a man ? asks Marcus Aurelius One thing and only one philosophy It keeps the inner man free from violence and unharmed superior to pains and pleasures doing nothing without a purpose It enables him to accept all that happens and all that is allotted and finally to wait for death with a cheerful mind as be ng nothing else th n a d solution of the elements of which every living being is compounded To Aurel us his imperial court is like a stepmother to whom one must be dutiful ph losophy like a mother from whom one gains solace and help Return to philosophy frequently and repose in her he tells himself so that what thou meetest with in the court appears to thee tolerable and thou tolerable in the court

The Stoic conception of philosophy as a moral discipline and as a consolation creates that sense of the word in which the familiar injunction to a person in distress— Be philosophical — carries the same meaning as Be stoical Philosophy provides only peace of mind not worldly riches or external power Philosophy does not promise to secure to man anything outside himself says Epictetus Nor does it fulfill its promise of inner strength without stern resolution to withdraw desire from the *goods of fortune*

Do you suppose that you can be a philosopher if you do as you do now? Epictetus asks Do you suppo e that you can eat and drink as you do now and indulge your anger and displeasure just as before? No you must sit up late you must work hard conquer some of your desires When you have carefully considered these drawbacks then come to us if you are willing to pay this price for peace of mind freedom tranquility Do not try to be first a philosopher then a tax collector then an orator then one of Caesar s procurators These callings do not agree You must be busy either with your inner man or with things outside that is you must choose between the position of a philosopher and that of an ordinary man

There seems to be no difference between the Stoic and Epicurean conception of philosophy Lucretius praises Epicurus thanks to whom s eet solaces of life soothe the mind for as soon as his philosophy begins to proclaim aloud the nature of things the terrors of the mind fly away

But for Lucretius philosophy achieves this boon not merely by curbing the passions and quieting desires but also and primarily by the truth of its teach ngs about the constitution of the world and the causes of th ng Nor is it merely that the ph losophical mind is able t dwell in the calm h gh pl fi mly on the he hts by the teach ng of whence you can look do vn on

them wandering hither and thither going astray as they seek the way of life Philosophy provides a more specific remedy for the deepest of human ills by freeing the mind from the close bondage of religion

Men fear the thunderbolts of the gods their intervention in the course of nature and human affairs and the punishments of the after life Before Epicurus taught them the mortality of the soul and the atomic determination of all things the life of man lay foul to see and grovelling upon the earth crushed by the weight of religion His teaching concerning what can come to be and what cannot and in what way each thing has its power limited rids the mind of the terrors fostered by religion This darkness of mind must needs be scattered by the outer view and the inner law of nature

Except for Lucretius the triumph of philosophy over religion does not seem to be central to ancient conceptions of philosophy s contribution to the mind and life of man In the pagan world religious belief is either combined with philosophy to constitute the worship of the gods which seems to be Plato s view in the *Laws* or it represents the superstitions of the ignorant as opposed to the sophistication of the educated Gibbon describes the rift between religion and philosophy not as a matter of intellectual controversy but as a division of society into classes lacking or having the benefits of education—or what is the same in the ancient world instruction in philosophy

But in the mediaeval world the distinction between philosophy and religion seems to be essential to the consideration of the nature and value of philosophy The importance of the distinction appears alike in the great books of the Christian tradition and in the great writings of the Mohammedan and Jewish cultures—in Augustine and Aquinas Avicenna Averroes and Maimonides—though the problem of philosophy s relation to religion and theology may be quite differently solved by each In all three religious communities secular learning and sacred doctrine are set apart by their origin—the one from the efforts of human reason the other from the word of God as revealed to the faithful Even when it is held in highest esteem as the best achievement of secular learning philosophy is for the most part regarded as inferior to the teachings of religion

There are those—the simply religious the devout the mystical—who abominate the pretensions of reason and the vanity of philosophers who claim either merit or need for any knowledge beyond the truths which God himself has revealed This position is expressed by such Christian writers as Tertullian Peter Damascene Bernard of Clairvaux or in the Arabic tradition by Al Ghazzali s *The Destruction of Philosophy* Al Ghazzali is answered by Averroes in his *Destruction of the Destruction* which asserts the supremacy of philosophy Averroes reserves philosophy for men of requisite intellectual strength and relegates theology and religion to those who must substitute opinion and imagination for reason

Neither Augustine nor Aquinas goes to these extremes They do not dismiss philosophy as useless learning or as dangerous folly subversive of the wisdom of faith but neither do they admit the sufficiency of philosophy for know edge of God—the mysteries of the divine natu God s providence and His gracious gift of salvation to man

Quoting St Paul s warning to beware lest any man spoil you through philosophy and vain deceit according to the tradition of men and the rudiments of the world and not accordin to Christ Augustine defends his praise of the Platonic philosophy which in his judgment comes nearest to the Christian faith on the ground that the Apostle also said to the gentiles that that which is known of God is manifest among them for God has manifested it to them Yet he adds that the Christian man who is ignorant of their writings is not therefore ignorant that it is from the one true and supremely good God that we have that nature in which we are made in the image of God and that doctrine by which we know Him and ourselves and that grace with which by cleaving to Him we are blessed

Philosophy according to Augustine can thus be dispensed with in all the major concerns of knowledge love or action But Augustine does not argue that it should therefore be discarded he says If those who are called philosophers and especially the Platonists have said aught that is true and in harmony with our faith we

are not only not to shrink from it but to claim it for our own use from those who have unlawful possession of it even as the spoils of the Egyptians belong to the Jews

Though Augustine and Aquinas conceive the relation of faith and reason differently they seem to share a conception of philosophy as the handmaiden of theology when faith seeks understanding For Aquinas this does not appear to imply lack of dignity or even the lo s of a certain autonomy on the part of philosophy On the contrary so highly does he regard the demonstrations of Aristotle whom he calls the philosopher that he opens the *Summa Theologica* with the question Whether besides th philosophical sciences any further doctrine is required.

He answers that it was necessary for the salvation of man that certain truths which exceed human reason should be made kno vn to him by divine revelation Even as regards those truths about God which human reason can investigate it was necessary that man be taught by a divine revelation For the truth about God such as reason can know it would only be known by a few and that after a long time and with the admixture of many errors whereas man s whole salvation which is in God depends upon the knowledge of this truth It was therefore necessary that besides the philosophical sciences investigated by reason there should be a sacred science by way of revelation. That sacred science is theology—not the theology which is a part of philosophy but the theology whose princ ples come from faith rather than from reason

There is no reason Aquinas writes why those th ngs which are treated by the philosophical sciences so far as they can be known by the li ht of natural reason may not also be treated by another science so far as they are known by the light of the divine revelation On this view sacred theology may treat of certain things such as the mystery of the Trinity which do not belong p operly to the philosopher because they exceed the power of reason to demonstrate but other matte s concerning nature man and God may belong both to the philosopher and to the theologian who consider them accord ng to their different l ghts Since a truth cannot conflict with a truth though reason sponsors one and faith the other there can be no conflict between philosophy and theology

SOME MODERN philosophers like Bacon and Locke seem to agree with mediaeval theologians about the subordination of philosophy to theology But for the most part the modern tendency increasingly evident in the writings of Descartes Spinoza Kant and Hegel is to insist upon the complete autonomy of philosophy

Hegel for example challenges the imputation against Philosophy of being shy of noticing religious truths or of having occasion to be so and the insinuated suspicion that it has any thing but a clear conscience in the presence of these truths So far from this being the case Hegel remarks the fact is that in recent times Philosophy has been obliged to defend the domain of religion against the attacks of several theological systems

The diverse aspects of the problem of the relation of philosophy to theology and of theology to faith are discussed in the chapters on METAPHYSICS THEOLOGY and RELIGION The problem which is more characteristic of the modern consideration of philosophy concerns its relation to science

To state the problem some distinction between the two is necessary and making this distinction represents a novel departure both in thought and language As we have seen philosophy and science are almost identified throughout the ancient and mediaeval tradition Insofar as the word science means knowledge rather than opinion the result of philosophical inquiry is science and philosophy as a whole is divided into a number of sciences There may be as anc ent writings seem to suggest sciences which aim at useful productions rather than at speculative or practical wisdom and fall below the level of ph losophy or there may be as some Christian theologians hold a sacred science superior in its wisdom to all the philosophical sc ences But these exceptions to the identity of philosophy and science merely confirm the point that in the ancient o mediaeval v ew philosophy is scientific and consists of sciences even though there may be sciences which are not ph losophi al

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This use of the wo ds science and

ophy persists well into modern times Hobbes for example presents his classification of the types of knowledge under the heading science that is Knowledge of Consequences which is also called Philosophy Bacon proposes to divide sciences into theology and philosophy Descartes uses the words science and philosophy interchangeably Among the different branches of Philosophy he says I had in my younger days to a certain extent studied Logic and in those of Mathematics Geometrical Analysis and Algebra—three arts or sciences which seemed as though they ought to contribute to the design I had in view In the Prefatory Letter to his *Principles of Philosophy* he likens philosophy as a whole to a tree whose roots are metaphysics whose trunk is physics and whose branches which issue from this trunk are all the other sciences These reduce themselves to three principal ones *ie* medicine mechanics and morals

Even as near the end of the eighteenth century as Hume the word philosophy continues to be the general name for the particular sciences It covers the experimental study of natural phenomena as well as what are for Hume the non experimental sciences of mathematics and psychology But it excludes divinity or theology insofar as its best and most solid foundation is *faith* and divine revelation metaphysics which is nothing but sophistry and illusion and all inquiries into particular as opposed to general facts such as history chronology geography and astronomy

Nor is this use of terms confined to what readers today would call books of philosophy The authors of the books which are today regarded as among the foundations of modern science—Galileo Newton Huygens and in the eighteenth century Lavoisier and Fourier—refer to themselves as philosophers and to the science in which they are engaged *e g* mathematics mechanics physics chemistry as parts or aspects of natural philosophy They do however indicate an awareness of how they differ from ancient and mediaeval scientists (who also called themselves philosophers) by calling their own work experimental philosophy

In this phrase lies the root of the distinction between philosophy and science as that distinction is generally understood by writers since the eighteenth century The word experimental applied to philosophy signifies a radical difference in the method of inquiry and even in the objects to be investigated for certain objects can be known only by experimental or empirical research Kant appears to be the first (in the great books at least) to make a sharp separation between the investigation of either nature or mind by what he calls empirical as opposed to rational methods He still uses the name science for both sorts of investigation but he appears to restrict philosophy to the latter—the pure the *a priori* the rational sciences.

Two other innovations must be noted Though Kant regards it as a rational discipline he excludes mathematics entirely from philosophy and criticizes its misleading influence upon those philosophers who have tried to imitate mathematical thought And though he sometimes uses metaphysic narrowly to designate the critical examination of pure reason itself he also says that this name of metaphysic may be given to the whole of pure philosophy excluding all that belongs to the empirical and the mathematical employment of reason Considering that it has only two objects nature and freedom—that which *is* and that which *ought to be*—Kant divides philosophy into the speculative and the practical use of pure reason which gives rise to a *metaphysic of nature* and a *metaphysic of morals* Metaphysic therefore that of nature as well as that of morals and particularly the criticism of our adventurous reason which forms the introduction to and preparation for it constitute together Kant writes, what may be termed philosophy in the true sense of the word Its only goal is wisdom and the path to it science

Kant s innovations in vocabulary plainly announce the separation of philosophy from mathematics and experimental science which is only intimated by earlier modern writers But Kant still uses the word science for both the philosophical and the empirical sciences The final step is taken in the nineteenth century when the word science is restricted to mathematics and to such knowledge of nature man and society as can be obtained by the methods of experimental or empirical research William James, for example stresses the fact that he is trying to expound psychology as one of the natural

sciences and to that end he tries to separate the problems which are capable of empirical in vestigation from those which belong to philo sophical speculation For Freud that separation is an accomplished fact and one which leaves to philosophy no problem that can be solved by science

According to Freud it is inadmissible to declare that science is one field of human in tellectual activity and that religion and philos ophy are others at least as valuable and that science has no business to interfere with the other two On the contrary Freud thinks it is right for scientific research to look on the whole field of human activity as its own and to criticize the unscientific formulations of philosophy The trouble with philosophy is that it behaves itself as if it were a science but it parts company with science in that it clings to the illusion that it can produce a com plete and coherent picture of the universe It is this illusion which science continually punctures sin e in Freud s opinion that pic ture must needs fall to pieces with every new advance in our knowledge.

WHEN SCIENCE AND philosophy are set apart at last it is possible to make sense of the typically modern questions concerning philosophy How does it stand in relation to science? Does it con sist of verifiable knowledge comparable to that which can be obtained in the natural and social sciences? If not what is the standard of truth in philosophy? Does it consist of definitions and postulates leading to rigorously demonstrated conclusions in a manner comparable to mathe matics especially in its modern construction? If not must it not be re arded as opinion or speculation rather than as knowledge in any strict sense? Or if ph losophical thought can be compa ed with mathematics does not the di versity of definitions and postulates employed by different philosophers reduce philosophy to a collection of competing systems rather than a sin le discipline in which philosophers work cooperatively as do scientists and mathema t cians?

How ever the foregoing questions are an swered there are still others Does philosophy have distinct branches divided accord ng to their objects of study like the natural sciences or is philosophy to be identified with metaphys ics? If in addition to metaphysics there is a philosophy of nature how are its principles and conclusions related to the findings of the natural sciences which appear to study the same object? Similarly if psychology is a branch of philoso phy how is it related to experimental or clinical psychology? What is the relation of moral and political philosophy to the empirical social sciences concerned with describing not judging or regulating human conduct and ocial insti tutions? Is economics a science or is it a branch of moral philosophy or if it is both how are the two related?

What is the use of philosophy especially in its theoretic branches if unlike science it can not be applied to the mastery of physical nature and the production of utilities whether bridges or bombs? What finally at the end of its long history does philosophy come to if in such marked contrast to the continuously acceler ated progress of the sciences it cannot claim any signal advance on which all philosophers are agreed but instead must admit that most of its problems seem to be perennially debated now as in every preceding century?

SOME OF THESE questions as well as certain answers to them are considered in other chap ters the comparison of empirical re earch and philosophical thought as constituting different types of science in the chapter on SCIENCE the distinction and relation between natural philos ophy and natural science in the chapter on PHYSICS the difference between philosophical and scientific psychology in the chapter on MAN the function of definitions hypotheses postulates or axioms in the foundat on and method of philosophy and science in the chapter on PRINCIPLE the d fference between the prac t cal use of philosophy in the sphere of morals and the use of science in the sphere of the pro ductive arts in the chapter on KNOWLEDGE the accumulat on of truth as measuring advances in science and philosophy in the chapter on PROG RESS

Here we must observe th t such answers to these questions as tend to subordinate philo o phy to science originate exclusi ely th mod ern views of the nature of knowl dge of the criteria of truth and of the cap c ties of the

phy does not promise eternal salvation or earthly prosperity The uses of philosophy as compared with religion and science must somehow be assessed in the terms which from the beginning of philosophy are of its essence—the love of wisdom and through it the search for human wisdom which shall be at once speculative and practical

OUTLINE OF TOPICS

REFERENCES

To find the passa es cited use the numbers i i heavy type which are the volume and page numbers of the passages eferred to For example, in 4 Ho ER *Il ad* BK II [265 283] 12d, the n mb r 4 is the n mber of the volume in the set the number 12d indicates that the pas-sa e is in secti n d of page 12

PAGE SECT NS When the text is printed in one olumn the letters a and b refer to the upper and lower hal es f the page For example, n 53 JAMES *Psychology* 116a 119b the passage be ns in the upper half of pa e 116 and ends in the lo ver half of pa e 119 Wh n the text is pr nted in two columns the letters a and b refer to the upper and lo er h lves of the left hand side of the pag the l tters c and d to the upper and lo er hal es of the ri ht hand s de of the page For example in 7 PLATO *Symposium* 163b 164c th passag begins in the lower half of the left hand side of p ge 163 and ends in the upper half of the r ght hand side of p ge 64

AUTHOR S D VIS ONS One or more of the main d visions of a wo k (such s PART BK CH SECT) are sometimes in luded in the reference line numbers in brackets ar given in cer tain cases *e g Iliad* BK I [265 283] 12d

B BLE REF RENCES The references are to book chapter and verse When the King James and Douay versi ns differ in title of books or in the numbering of ch pters o verse the King James vers on is cited first and the Douay ind cated by a (*D*) follows *e g* OLD TESTA MENT *N hemiah* 7 45—(*D*) *II Esdras* 7 46

SYM OLS Th abbreviat on esp calls the reader s attention t one o mo e espe ally rele ant parts of a whol refer nce p s im s gnifies that the topic is d scu sed i it rmit tently r ther than co tinuously in the work or passage cited

For addit onal information con erning the styl of the refer nces se the E planat on of R f re c Style for g neral guidance in the use of *The Great Ideas* consult the P eface

The definition and scope of philosophy

7 PLATO *Ly s* 20a / *Euthydemu* 74b 76b / *Re public* K II 320b BK V 368c 373c BK VI VII 383d 398c / *S ph t* 570a 574 esp 571a c / *Phileb s* 633a 635a esp 6 4b 635a / *Seventh Letter* 809 811a

8 ARI TO LE *Phys cs* BK I CH I [184 10 16] 259 CH 9 [192 33 b2] 268 d K II CH 2 270 271a esp [194b9-15] 271a CH 7 [98 22-3] 275b-c / *Met physics* BK -VI 499a 50a c esp BK I CH 3 501c 502d BK II H I 511b d 512b BK II C I 513b d 516d BK I H I 3 522 525a BK VI 547b d 550 BK X C I I 537a 588a CH 3-4 589a 590 C I 7-8 92b 593d / *Soul* BK I CH I [403b10-17] 632d

9 ARIST TLE *Ethi s* BK VI CH 3 388b c CH 6 389d

1 E CTETUS *D sc u es* BK CH I 150a 151b CH 17 158d 161a

18 AU U TINE *Co f s ons* BK III p 8 14d 15a / *City of God* K VII CH 264b d 265b

19 AQUINAS *Summ Theolog ca* ART I Q I A I 3b-4a

23 H B S *Leviath* ART I 60a b 65 d 71c-d 72 d PART IV 267 272b

30 BACON *Ad an ement f Le ning* 39d-41b 42 46a 48d 49b / *N vum O ga um* BK I APH 54 111 d APH 66 114d 115c APH 80 120a b APH 95 126b c APH 107 128c BK II APH 9 140b

31 DE CART *Rul s* I II 1a 5a / *D scourse* ART II 47a-48b PART IV 51b 52a

35 HUME *Hum Understand ng* SECT I 451a 455b passim SECT VIII DIV 81 487a CT XI D V 130 32 508 509d

39 SMITH *W alth of Nat* BK 5d 6a

42 KANT *Pu Reas* 1a 13d 211 218d 243c 250a c esp 245 246a / *Fund Pri M t phy f M als* 253a c 254b 264b d 270 d / *Pra tical Rea n* 337a 338 / *P ef Meta phys cal Elements f Ethics* 365a 366a / *I Metaphy c of Mo als* 388a c / *Judg ment* 463 467a

46 HEGEL *Ph losophy of Right* PR F 1b 7d ADD T ONS 3 116a / *Philos phy of Hi tory* INTRO 156 158a 184d 185d

53 JAMES *Psychology* 641a b 758a

54 FR UD *New In odu tory Lectu res* 874a

1a The rel t on of ph losophy to theology o r l gion

7 P TO *Republ* K IV 345d 346a / *Th ete tus* 528c 531a / *Laws* K X 797 798b

2 The d sions of ph losophy 2b The branches of speculative ph losophy the divisions of nat ral philosophy)

18 Augustine City of God bk viii ch 4 266d 267c bk xi ch 25 336b d
19 Aquinas Summa Theologica part i q i a i rep 2 3b 4a q 85 a i rep 2 451c-453c
23 Hobbes Leviathan part i 71c d 72a d part iv 269b c
30 Bacon Adva cement of Learning 15d 39d 48d esp 40a 41b 42a-c 43a-45a 55b 61d esp 56c 58c 59c 60c / Novum Organum bk ii aph 9 140b c
31 D scartes Rules i ii 1a 3b iv 5a 7d / D scou se part ii 46c-48b / Objections a d Repl es 169c 170a
34 New on Pr nciples 1a b
35 Locke Human Understanding bk iv ch xxi 394d 395a c
35 Berkeley Human Knowled sect 101 432c
39 Smith Wealth of Nat ons bk v 335b 337a
42 Kant Pu e Reason 1 13d 15 16c 34a 37d esp 34c 35b 59c 210b c / Fund Pr n Metaphysic of Mo als 253 d 264d 266c d / Pract cal Reason 300d [fn 1] 351b 352c / Judgement 463a 467a esp 463b 464a 476a 479d 485b 486d 488a 495a c 515b c 578a b
53 Ja es Psych logy 867a

2c The nat re and branches of practical or moral philosophy econom cs ethics pol t cs jur sprudence poetics or the theory of art

7 Plato Rep bl c k x 427c 434c / States m n 604c 608d
8 Aristotle Top cs bk i ch 14 [105b19-29] 149c / Met phy cs k ii ch i [993b20 23] 512a k vi c i i [i 5b19-28] 547d bk xi ch 7 [1064 10-19] 592b c
9 Aristotle Eth s bk i ch i 4 339a 340d ch 7 [i 98 20 b8] 343 344a bk ii ch 2 [1103b26- 104 9] 349b ch 4 350d 351b pa s m k iii ch 3 [iii 30-b] 358b k vi c i 8 390d 391 k x ch 9 434a-436a c / Pol t cs bk i c i 487 488b / Po t s 681a 699a c pass m esp ch -5 681a 684a
18 Augu tine Co fessio s bk i i par 4 16d 17a / City of G d bk v ii ch 8 270 d
19 Aquin Summa Theolog ca part i q i aa 4-5 5a 6b q 14 a 16 90b 91b q 86 a 3 contr ry 463b d
21 Dante D i e Comedy purgatory xviii [40-72] 80b c
23 Ho bes Le ath n p rt 58a b 72a d 78b c 80d 81a 95d 96b rt i 112c d 128d 129b 158 d 164a c part v 268d con lusion 282 d
30 B con Advancem nt of Le rning 81d 95b / Novu Organum bk i a i 3 107b
31 Descartes Discourse part vi 61b c 66d 67a c
34 Newton Optics bk iii 543b 544a
35 Locke Human Understanding bk iii ch xi sect 15 18 303b 304b esp sect 16 303 d bk iv ch iii sect 18 20 317d 9 ch iv sect 7 10 325b 326b ch xii sect 8 360c ch xxi sect i 3 394d 395a sect 5 395c
35 Hume Human Understanding sect i 1-5 451a-453b passim sect xii div 131-132 508d 509d passim esp div 13 509c d
38 Rousseau I equal ty 329a 334a,c
41 Gibbon Decline and Fall 75d 80b passim
42 Kant Fund Prin Metaphysic of Morals 253a 254b 264b d 266c d 271a-c 283d 28 d / Practical Reason 291a 296d 300d [fn i 304a d 307d 321b 327c d 329a 33 esp 329b d / Pref Metaphysical Eleme of Eth cs 366d 368a 370d 372a 373b-c 374a c 378a / Intro Metaphysic of Mora 383a d 388a d 390b d 391a / Science of Right 398a 399c / Judgement 463a-46 a 515b c 523d 524a 596c 598b
43 Federalist number 9 47a d number 31 103c 104a passim
43 Mill Utilitarianism 445a-447b passim 453c
46 Hegel Philosophy of R ght pref 1d 7c intro par i 9a
50 Marx Capital 6a 11d passim esp 6a d 8a 9b 178d 179c 265a 266a 267c d
51 Tolstoy War and Peace epilogue ii 680d 684a 689b c
54 Freud Civil ation and Its Discon.ents 800c 801b

3 The method of ph losophy

3a The foundations of philosophy in experience and common sense

8 Aristotle Prior Analytics bk i ch 30 [46a 18 28] 64a / Posterior Analytics bk i ch 18 111b c ch 31 120a c bk ii ch 2 [90a24 3] 123b-c ch 19 136a 137a c / Phys cs bk i ch i 259a b / Heavens bk iii ch i [298b13 24] 390a b ch 7 [306 i 18] 397b-c / Gener ion and Corrupt on bk i ch 2 [316 5 14] 411c-d ch 3 [318b19 31] 415c d / Metaphysics k i ch i 499a 500b / Sense and the Sen ible ch i [436b13 437a16] 673c 674a
12 Lucretius Natu e of Things bk i [4 8 449] 6b c [693 700] 9c bk iv [353-5 1] 48d 51a esp [409-521] 50b 51a
23 Hobbes Leviathan part iv 67 b
28 Harvey Motion of the Heart 268a-c / On A imal Generation 331b 335c
30 Bacon Ad ancement of Learning 16a 57d 58b / Novum O ganum bk i aph 19-22 108b-c
31 D scar es Discourse part i 53b / Med tations i 75 77c

31 S INOZA *Eth cs* PART II PROP 10 SCHOL 376d 377a
35 HUME *Human Understand ng* SECT I DIV 4 451d-452a SECT XII DIV 130 508c d
42 KANT *Pure Reason* 14a b 15c 16c 19a 236d 237a 247a b / *Fund Prin M taphys c of Morals* 253a-c 254b-c 263b-d 271a-c 281c 282d / *Practical Reason* 320c 321b 329d 330c 358a / *Pref Metaphysical Elements of Ethics* 365a d / *Intro Metaphys c f Mor ls* 387a 388a / *Science of Right* 397b 398a / *Judgement* 551a 552 562d 563b 603 b 604a b
43 M LL *Ut litar anism* 445b-446b
53 J ES *Psychol gy* 655a 659a

3b The philosopher s appeal to first principles and to definitions

7 PLATO *Republ* BK VI 383d 388a BK VII 388 398c esp 396d 398c
8 ARISTOTLE *Posteri Analyt cs* 97a 137a c esp BK I CH I 3 97a 100a CH 9 104b d H II 105d 106b CH 19-22 111c 115b CH 31 32 120 121b BK II CH I 10 122b d 128d CH 13 131b 133c / *Top s* BK CH I [100ª25 ᵇ21] 143a b / *Metaphysics* K I CH 2 [982ª25 28] 500c BK II CH 2 [994ᵇ16-30] 513a b BK III CH I [995ᵇ6-10] 514a CH 2 [996ᵇ26-997 15] 515b-d BK VI C I I [1025ᵇ1-10 6 6] 547b d 548 BK XI CH I [59ª23- 6] 587a CH 4 [1 61ᵇ 7]-CH 7 [1064ª28] 589d 592c BK XII CH 4 [078ᵇ13 30] 610a b / *S ul* BK I CH I 631a 632d BK II CH 2 [413 11 19] 643a b CH 3 [414ᵇ20 415ª14] 644d 645b
9 ARISTOTLE *Eth* BK CH 4 [1 95 30-ᵇ 2] 340 d CH 7 [1 98ª20-ᵇ8] 343c 344a BK VI CH 6 [1140ᵇ31]-CH 7 [1141 19] 389d 390a CH 11 [143 32 ᵇ10] 392d 393a
19 AQUINAS *Summ Theol gica* P RT I Q I A 2 ANS a d EP I 4a c Q 2 A 2 11d 12c
23 HO B S *Leviath n* PART I 56b-d 58d 60a 65d PART IV 269b-c
31 D S ART S *Rules* IV 5c d 6d XII 21b c / *Discour* 41a 67a c e p PART IV 51b-54b / *Med t t ns* 69a 72d I 75a 77 / *Obj ct ns nd Repl es* PO TULATE I I 130d 131a 206a 207a
31 SPIN ZA *Ethics* PART II PROP 10 SCHOL 376d 377a
33 PASCAL *Geomet al Demonst ation* 430b 434a
35 LO KE *Hum n Under t ndi g* BK I CH III SECT 4 25 120 d
35 HUM E *Human U derstand g* S CT I DI 2 451b-c
42 KANT *Pu Reaso* 179d 182b 215d 217a / *Pr ctical Re son* 293 294c
43 FEDERAL T NUM ER 31 103c 104
43 M LL *Util tari sm* 445a-447b passim
46 HEG L *Ph l sophy of Right* PRE 1b INT O par 2 9b 10a ADDITIONS 3 116a / *Philosophy f Hist ry* NTRO 156c 158a

3c The processes of philosoph cal thought induction intuition definition demon stration reason ng analysis and syn thesis

7 PLATO *Protagoras* 50d 52d 57a c / *Et tl y demus* 65 84a c / *Ph ed us* 134a d 139d 140b / *Meno* 179d 183c / *R public* BK VI VII 383d 398c / *Parmenides* 486 511d esp 491 d / *Thea tet is* 514b-515d 525d 526b / *Sophist* 570a 574c esp 571a c / *Statesman* 580a 608d esp 595a d / *Philebus* 609a 613c / *Seventh Letter* 809c 810d
8 ARISTOTLE *P sterior Analyt cs* 97a 137 c esp BK I CH 1-3 97a 100 BK II CH I I 122b d 128d / *Top s* BK VIII CH I [55ᵇ1 16] 211a b CH 14 [163ᵇ8 16] 222a / *S phistical Refuta tions* CH 16 [175 I 12] 241a / *Physics* BK I CH I 259a b CH 2 [84ᵇ25 85 19] 259c 260a BK II CH 7-9 275b 278a c / *Heavens* BK II CH 13 [294ᵇ6-14] 386a BK II CH 7 [306 1-18] 397b c / *Generat n and Corrupt on* BK I CH 2 [3 6 5 14] 411c d / *Metaphys cs* BK II CH 2 [997ª25 34] 515d 516a BK IV CH 2 522b 524b esp [1 4ª25 31] 523b c [004ᵇ18 27] 523d CH 4 [1005ᵇ35 I 06ª28] 525a c CH 7 [1012 18 24] 532a b CH 8 [012ᵇ5 8] 532c BK VI CH I [I 25ᵇ1 16] 547b BK XI CH I [059ª29-34] 587b CH 3 589a d esp [1061 10-18] 589b CH 5 [I 61ᵇ34-1062 19] 590 c CH 7 [1064 4-9] 592b BK X CH 4 [I ,8ᵇ13 30] 610a c / *Soul* K I CH [4 2 1]-CH 2 [4 3ᵇ 3] 631a 633a BK II CH 4 [415 4 2] 645b c
9 A ISTOTLE *Ethics* BK I H 3 339d 340b CH 4 [1095 30-ᵇ12] 340 d C I 7 [098ª20-ᵇ8] 343c 344 BK VI CH 3 388b c CH 6 389d CH 11 [43 3 ᵇ11] 392d 393a
17 PLOTINUS *Fir t Ennead* TR III CH 4-6 11a 12b / *S th E n ad* TR CH 4 270 271a
18 AUGU TINE *City of God* BK V I CH 2-8 265b 270d passim
19 AQUINAS *Summa Theologica* ART I Q 2 A 2 11d 12c Q 32 A I REP 2 175d 178a
23 HOBBES *Lev than* PART I 58a 60b 65c d PART IV 267a c 269b c
24 RABELAIS *G gantua and Pa tag uel* K II 101b 106a
30 BACON *Ad ancement f Le ni g* 42a c 56 59 / *N um O g num* 105 195d
31 D S RT *Rul s* I XI I 1a 27d / *D scour e* PART II 46 -47d / *M d t tio* 75 77 / *Obj ti ns and R pli* 119 120c 128a 129a
33 PAS AL *G ometric l Dem n trat n* 442a 443b
34 NEWTON *P i ciples* K III RULES 270a 271b / *Optics* BK I 543 544a
35 LO KE *Huma Underst d g* IN RO CT 3-5 93d 94d BK I CH ECT 24 5 120 d
35 H *H m n U der ta d ng* CT D V 2 451b c D V 7-9 453 455a CT I 457a b T X D V 116 503d 504a

3. *The method of philosophy* 3c *The processes of philosophical thought: induction, intuition, definition, demonstration, reasoning, analysis and synthesis*)

38 Rousseau *Inequality* 339d 341b 342b
42 Kant *Pure Reason* 1a 13d 16a c 109d 112d 115d 116a 119a b 184b c 185b c 193a 200c esp 193d 194b 199a c 211c 218d / *Fund Prin Metaphysic of Morals* 264d / *Practical Reason* 294a b 330d 331a 336d 337a c / *Pref Metaphysical Elements of Ethics* 365a 366a 376c d
43 Mill *Liberty* 274b 293b passim
51 Tolstoy *War and Peace* EPILOGUE II 690a b
53 James *Psychology* 674a 675b esp 675b 687a

3*d* The methodological reformation of philosophy

30 Bacon *Advancement of Learning* 11a 17b esp 1 a 13c 15a b 16a 30b-c 40a c 47d 48d 65a c / *Novum Organum* 105a 195d
31 Descartes *Rules* I X II 1a 27d / *Discourse* 41a 67a c esp PART III IV 48b 54b / *Meditations* 69a 71a c 1 75a 77c / *Objections and Replies* 119c d 126a b 128a 129a POSTULATE I PROP IV 130d 133a c 134b c 167a c 206a 207a 237b 238b 267a 277a c
35 Locke *Human Understanding* BK IV CH XII 358c 363b esp SECT 14 15 362d 363b
35 Berkeley *Human Knowledge* INTRO 405a 412a c passim esp SECT 21 5 411b 412a c SECT 133 134 439c 440a
35 Hume *Human Understanding* SECT I DIV 7 10 453c 455b SECT VII DIV 49 471c d SECT XII DIV 16 503d 504a
42 Kant *Pure Reason* 1a 13d 19a 22a c 36d 37b 101d 102a 133 134d 146a 149d 157d 196b 197c 218d 227a esp 224a 227a 248d 250a c / *Fund Prin Metaphysic of Morals* 253c d 260d 261c 273d 274a 277d 279d / *Practical Reason* 292a 296d esp 292d 293b 294a b 299d 311d 313d 320c 321b 331a 332d 335b c 336d 337 c / *Judgement* 492c d 567c 568a
54 Freud *New Introductory Lectures* 875a

4. The uses of philosophy: diverse conceptions of its aim, function, and value

4*a* The philosophic mode of life: contemplation and happiness

7 Plato *Euthydemus* 69a 71a / *Phaedrus* 122b 128 / *Symposium* 167b d / *Meno* 183c 184c / *Apology* 200a 212 c / *Phaedo* 223a 226c 231c 234c / *Republic* BK V VII 368c-401d / *Timaeus* 476a b / *Theaetetus* 528b 531a / *Philebus* 609a 639a c esp 633a 639 c / *Laws* BK I 643c d / *Seventh Letter* 808c 809a
8 Aristotle *Topics* BK I CH 2 [118 6-16] 164d 165a / *Metaphysics* BK X I CH 7 [1072^b 14 29] 602d 603a
9 Aristotle *Ethics* BK I CH 8 [1098^{b}19-1099^a 6] 344a c BK VI CH 12 [1144^{a}2-6] 393c BK X CH 7-8 431d-434a / *Politics* BK II CH 7 [6-8 14] 462d BK VII CH I 3 527a 530a
12 Lucretius *Nature of Things* BK II [1-6] 15a d BK V [1-54] 61a d BK VI [1 9] 80a b
12 Epictetus *Discourses* BK I CH 4 108d 110a CH 15 121c d CH 27 132b-133b CH 29 134-138a BK II CH I 138b d 140c CH 12 1 152c CH 14 153d 155b CH 17 158d 161a BK III CH 5 180d 181d CH 10 185d 187 CH 190a 191a CH 21 22 193d 201a BK IV CH 230b 232c
12 Aurelius *Meditations* BK III SECT 6 261c SECT 9 261d SECT 12 262b-c BK IV SECT 264d BK V SECT 8-9 269d 270c BK VI SECT 12 274c BK X SECT 12 298c d
13 Virgil *Georgics* II [490-493] 65b
17 Plotinus *First Ennead* TR III CH 5-6 11 12b TR IV CH 4 16 14a 19b
18 Augustine *City of God* BK VIII CH 5 268d CH 8 270a d BK X CH 2 299d 300
19 Aquinas *Summa Theologica* PART I Q 1 A 8 REP 4 57b-58b Q 26 A 2 A s and 150c 151a PART I II Q 3 AA 4-5 625a 627a
20 Aquinas *Summa Theologica* PART I II Q A 5 REP 1 2 79b 80c
22 Chaucer *Prologue* [285 308] 164a b
25 Montaigne *Essays* 70d 72a 10 a 112 231d 246a 395d 503b 504c 508a 512 538a 543a c
30 Bacon *Advancement of Learning* 69d esp 70b-72c 73c 74a
31 Descartes *Rules* I 1d / *Discourse* P 41d-42a PART III 49d 50b / *Meditations* 88d 89a
31 Spinoza *Ethics* PART IV APPENDIX 447b c XXXII 450c d PART V 451a-463d
35 Hume *Human Understanding* SECT I DIV 453b c
38 Rousseau *Inequality* 345a / *Political Economy* 373d 374a
42 Kant *Judgement* 591b 592a
43 Mill *Utilitarianism* 451c
46 Hegel *Philosophy of History* PART I 368c 369a c
47 Goethe *Faust* PART I [614-685] 17 18 [1194 1201] 29b
48 Melville *Moby Dick* 255a 308 b

4*b* Philosophy as a moral discipline: the consolation of philosophy

7 Plato *Euthydemus* 69a 71a / *Meno* 183c 184c / *Phaedo* 222a 226c 231c 234c / *Timaeus* 476a b / *Theaetetus* 528 531
12 Lucretius *Nature of Things* BK I [1-9] 1d 2d BK II [1-61] 15a d BK III [1-9] 30a 31b [307 322] 34a b [830 1094] 40c-44a BK V [1-54] 61a d BK VI [1 41] 80a d
12 Epictetus *Discourses* 105a 245a c esp BK I CH 4 108d 110a CH 9 114c 116b CH 15 121c d, CH 17 122d 124a CH 24 129a d CH 27 132b

The oci l role of philosophy the philoso pher nd the statesman the philosopher king

5 The char cter and training of the philoso pher the d fficulty of being a ph lo o pher

(3 *The method of philosophy 3c The processes of philosophical thought induction intuition definition demonstration reasoning, analysis and synthesis*)

38 Rousseau *Inequality* 339d 341b 342b

42 Kant *Pure Reason* 1a 13d 16a c 109d 112d 115d 116 119a b 184b c 185b c 193a 200c esp 193d 194b 199a-c 211c 218d / *Fund Prin Metaphysic of Morals* 264d / *Practical Reason* 294a b 330d 331a 336d 337a c / *Pref Metaphysical Elements of Ethics* 365a 366a 376c d

43 Mill *Liberty* 274b 293b passim

51 Tolstoy *War and Peace* epilogue ii 690a b

53 James *Psychology* 674a 675b esp 675b 687a

3d The methodological reformation of philosophy

30 Bacon *Advancement of Learning* 11a 17b esp 12a 13c 15a b 16a 30b c 40a c 47d 48d 65a c / *Novum Organum* 105a 195d

31 Descartes *Rules* i xiii 1a 27d / *Discourse* 41a 67a c esp part iii iv 48b 54b / *Meditations* 69a 71a c 75a 77c / *Objections and Replies* 119c d 126a b 128a 129a postulate i p op iv 130d 133a c 134b c 167a-c 206a 207a 237b 238b 267a 277a c

35 Locke *Human Understanding* bk iv ch xii 358c 363b esp sect 14 15 36 d 363b

35 Berkeley *Human Knowledge* intro 405a 412a c passim esp sect 21 25 411b 412a c sect 133 134 439c 440a

35 Hume *Human Understanding* sect i div 7 10 453c 455b sect vii div 49 471c d sect xii div 116 503d 504a

42 Kant *Pure Reason* 1a 13d 19a 22a c 36d 37b 101d 102a 133 134d 146a 149d 157d 196b 197c 218d 227a esp 224a 227a 248d 250a c / *Fund Prin Metaphysic of Morals* 253 d 260d 261c 273d 274a 277d 279d / *Practical Reason* 292a 296d esp 292d 293b 294 b 299d 311d 313d 320c 3 1b 331a 332d 335b c 336d 337a c / *Judgement* 492 d 567c 568a

54 Freud *New Introductory Lectures* 875a

4 The uses of philosophy diverse conceptions of its aim function and value

4a The philosophic mode of life contemplation and happiness

7 Plato *Euthydemus* 69a 71a / *Phaedrus* 122b 128a / *Symposium* 167b d / *Meno* 183c 184c / *Apology* 200a 212a c / *Phaedo* 223a 226c 231c 234c / *Republic* bk v vii 368c-401d / *Timaeus* 476a b / *Theaetetus* 528b 531a / *Philebus* 609a 639a c esp 633a 639a c / *Laws* bk i 643c d / *Seventh Letter* 808 809a

8 Aristotle *Topics* bk iii ch [18[a]6-16] 164d 165a / *Metaphysics* bk xi ch 7 [1072[b]14 29] 602d 603a

9 Aristotle *Ethics* bk i ch 8 [1098[b]19-1099[a]6] 344a c bk vi ch 12 [1144[a]-6] 393c bk x, ch 7-8 431d-434a / *Politics* bk ii ch 7 [126- 8 14] 462d bk vii ch 1 3 527a 530a

12 Lucretius *Nature of Things* bk ii [1-61] 15a d bk v [1-54] 61a d bk vi [1 9] 80a 81b

12 Epictetus *Discourses* bk i ch 4 108d 110a ch 15 121c d ch 27 132b 133b ch 29 134d 138a bk ii ch 1 138b d 140c ch 12 1 b 152c ch 14 153d 155b ch 17 158d 161 bk iii ch 5 180d 181d ch 10 185d 187a ch 15 190a 191a ch 21 22 193d 201a bk iv ch 8 230b 232c

12 Aurelius *Meditations* bk iii sect 6 261a c sect 9 261d sect 12 262b-c bk i sect 16 264d bk v sect 8-9 269d 270c bk vi, sect 12 274c bk x sect 12 298c d

13 Virgil *Georgics* ii [490-493] 65b

17 Plotinus *First Ennead* tr iii ch 5-6 1 c 12b tr iv ch 4 16 14a 19b

18 Augustine *City of God* bk viii ch 5 26 d 268d ch 8 270a d bk x ch 2 299d 300a

19 Aquinas *Summa Theologica* part i q 12, a 8 rep 4 57b 58b q 26 a 2 a s and rep 2 150c 151a part i ii q 3 aa 4-5 625a 627a

20 Aquinas *Summa Theologica* part ii ii q 66 a 5 rep 1 2 79b 80c

2 Chaucer *Prologue* [285 308] 164a b

25 Montaigne *Essays* 70d 72 107a 1 231d 246a 395d 503b 504c 508a 5 538a 543a c

30 Bacon *Advancement of Learning* 69d 70a esp 70b 72c 73c 74a

31 Descartes *Rules* i 1d / *Discourse* part i 41d 42a part iii 49d 50b / *Meditations* 88d 89a

31 Spinoza *Ethics* part iv appendix 447b-c xxxii 450c d part v 451a-453d

35 Hume *Human Understanding* sect i div 1 453b-c

38 Rousseau *Inequality* 345a / *Political Economy* 373d 374a

42 Kant *Judgement* 591b 592a

43 Mill *Utilitarianism* 451c

46 Hegel *Philosophy of History* part iv 368d-369a c

47 Goethe *Faust* part i [614-685] 17a 18a [1194 1 01] 29b

48 Melville *Moby Dick* 255a 308a b

4b Philosophy as a moral discipline the consolation of philosophy

7 Plato *Euthydemus* 69 71a / *Meno* 183c 184c / *Phaedo* 222a 226c 231c 234c / *Timaeus* 476a b / *Theaetetus* 528 531a

12 Lucretius *Nature of Things* bk i [62-145] 1d 2d bk ii [1-61] 15 d bk iii [1-93] 30a 31b [307 322] 34a b [830 1094] 40 44a c bk v [1-54] 61a d bk vi [1 41] 80a-d

12 Epictetus *Discourses* 105a 245a c esp bk i ch 4 108d 110a ch 9 114c 116b ch 15 121c d ch 17 122d 124 ch 24 129a d ch 27 132b

The social role of philosophy the philoso pher nd the st tesman the philosopher king

5 The char cter and training of the philoso phe the d fficulty of being a ph loso pher

(3 *The method of philosophy* 3c *The processes of philosophical thought: induction, intuition, definition, demonstration, reasoning, analysis, and synthesis*)

38 ROUSSEAU *Inequality* 339d 341b 342b
42 KANT *Pure Reason* 1a 13d 16a c 109d 112d 115d 116a 119a b 184b c 185b c 193a 200c esp 193d 194b 199a c 211c 218d / *Fund Prin Metaphysic of Morals* 264d / *Practical Reason* 294a b 330d 331a 336d 337a c / *Pref Metaphysical Elements of Ethics* 365a 366a 376 d
43 MILL *Liberty* 274b 293b passim
51 TOLSTOY *War and Peace* EPILOGUE II 690a b
53 JAMES *Psychology* 674a 675b esp 675b 687a

3d The methodological reformation of philosophy

30 BACON *Advancement of Learning* 11a 17b esp 12a 13c 15a b 16a 30b c 40a c 47d 48d 65a-c / *Novum Organum* 105a 195d
31 DESCARTES *Rules* I XIII 1a 27d / *Discourse* 41a 67a c esp PART III IV 48b 54b / *Meditations* 69a 71a c 75a 77c / *Objections and Replies* 119c d 126a b 128a 129a POSTULATE I PROP IV 130d 133a c 134b c 167a c 206a 207a 237b 238b 267a 277a c
35 LOCKE *Human Understanding* BK IV CH XII 3 8c 363b esp SECT 14 15 362d 363b
35 BERKELEY *Human Knowledge* INTRO 405a 412a c passim esp SECT 21 25 411b 412a c SECT 133 134 439c-440a
35 HUME *Human Understanding* SECT I DIV 7 10 453c-45 b SECT VII DIV 49 471c d SECT XII DIV 116 503d 504a
42 KANT *Pure Reason* 1a 13d 19a 22a c 36d 37b 101d 102a 133c 134d 146a 149d 157d 196b 197c 218d 227a esp 224a 227a 248d 2 0a c / *Fund Prin Metaphysic of Morals* 253c d 260d 261c 73d 274a 277d 279d / *Practical Reason* 292a 296d esp 92d 293b 294a b 299d 311d 313d 320 321b 331 332d 335b-c 336d 337a c / *Judgement* 49 c d 567c 568a
54 FREUD *New Introductory Lectures* 875a

4 The uses of philosophy: diverse conceptions of its aim, function, and value

4a The philosophic mode of life: contemplation and happiness

7 PLATO *Euthydemus* 69a 71a / *Phaedrus* 122b 128a / *Symposium* 167b d / *Meno* 183c 184c / *Apology* 200a 212a c / *Phaedo* 223a 226c 231c 234c / *Republic* BK V VI 368c-401d / *Timaeus* 476a b / *Theaetetus* 528b 531a / *Philebus* 609a 639a c esp 633a 639a c / *Laws* BK I 643 d / *Seventh Letter* 808 809a
8 ARISTOTLE *Topics* BK III CH 2 [118 6-16] 164d 165a / *Metaphysics* BK XII CH 7 [1072b 14 29] 602d 603a
9 ARISTOTLE *Ethics* BK I CH 8 [1098b19-1099a6] 344a-c BK VI CH 12 [1144a2-6] 393c BK X CH 7-8 431d-434a / *Politics* BK II CH 1 [1267a8 14] 462d BK VII CH 1 3 527a 530
12 LUCRETIUS *Nature of Things* BK II [1-61] 15a d BK V [1-54] 61a d BK VI [1 49] 80a b
12 EPICTETUS *Discourses* BK I CH 4 108d 110 CH 15 121c d CH 27 132b-133b CH 29 ... 138a BK II CH 1 138b d 140c CH 12 ... 152c CH 14 153d 155b CH 17 158d ... III CH 5 180d 181d CH 10 185d 187a ... 190a 191a CH 21 22 193d 201a BK IV ... 230b 232c
12 AURELIUS *Meditations* BK III SECT 6 ... SECT 9 261d SECT 12 262b-c BK IV SECT ... 264d BK V SECT 8-9 269d 270c BK VI ... 12 274c BK X SECT 12 298c d
13 VIRGIL *Georgics* II [490-493] 65b
17 PLOTINUS *First Ennead* TR III CH 5-6 ... 12b TR IV CH 4 16 14a 19b
18 AUGUSTINE *City of God* BK VIII CH ... 268d CH 8 270a d BK X CH 2 299 ...
19 AQUINAS *Summa Theologica* PART I Q ... A 8 REP 4 57b 58b Q 26 A 2 A 3 ... 150c 151a PART I II Q 3 AA 4-5 625a ...
20 AQUINAS *Summa Theologica* PART I-II, Q ... A 5 REP 1 2 79b 80c
22 CHAUCER *Prologue* [285 308] 164a b
25 MONTAIGNE *Essays* 0d 72a 10 ... 231d 246a 395d 503b 504c 508a ... 538a 543a c
30 BACON *Advancement of Learning* 69d ... esp 70b 72c 73c 74a
31 DESCARTES *Rules* I 1d / *Discourse* PART I 41d-42a PART III 49d 50b / *Meditations* ... 88d 89a
31 SPINOZA *Ethics* PART IV APPENDIX ... 447b-c XXXII 450c d PART V 451a-453d
35 HUME *Human Understanding* SECT I DIV ... 453b-c
38 ROUSSEAU *Inequality* 345a / *Political Economy* 373d 374a
42 KANT *Judgement* 591b 592a
43 MILL *Utilitarianism* 451c
46 HEGEL *Philosophy of History* PART IV 368d 369a c
47 GOETHE *Faust* PART I [614-68 ...] ... [1194 1 01] 29b
48 MELVILLE *Moby Dick* 255a 308a b

4b Philosophy as a moral discipline: the consolation of philosophy

7 PLATO *Euthydemus* 69a 71a / *Meno* 183c 184c / *Phaedo* 222a 226c 231c 234c / *Timaeus* 476a b / *Theaetetus* 528c 531 ...
12 LUCRETIUS *Nature of Things* BK I [62-79] 1d 2d BK II [1-61] 15a d BK III [1-93] 30a 31b [307-322] 34a b [83 1094] 40c-44a BK V [1-54] 61a d BK VI [1 41] 80a-d
12 EPICTETUS *Discourses* 105a 45a c esp BK I CH 4 108d 110 CH 9 114c 116b CH 12 121c d CH 17 122d 124a CH 24 1 9a d CH 2 ...

133b CH 29 134d 138a BK II CH I 138b d 140c CH 14 17 153d 161a BK III CH 5 180d 181d CH 21 23 193d 203b BK IV CH I 213a 223d CH 10 238d 240d

12 AU ELIUS *Meditat ons* 253a 310d esp BK II SECT II 12 258 c SECT 14 258d SECT 17 259b d BK III SECT 3 260b BK IV SECT 3 263b-264a SECT 5 264b SECT 46 267c SECT 48 267d 268a SECT 50 268c BK V S CT 9 270b c SECT 14 271b BK VI SECT 12 274c SECT 24 276b SECT 47 278d SECT 49 279a BK VII SECT 32 35 282a BK VIII SECT I 285a b SECT 25 287b-c SECT 31 287d SECT 58 290d BK IX SECT 3 291d 292a SECT 21 293b-c, SECT 41 295c BK XII SECT 35 36 310c-d

13 VIRGIL *Georgics* II [490 493] 65b

18 AUGUSTINE *City of God* BK VIII CH 3 266a d CH 8 270a d

25 MONT IGNE *Essays* 21d 22a 28a 36b 55d 62a 69d 75a 231d 237d 240c 242d 283b-28-c 401c d 503b 504c 508a 512a 529c 530c

30 BACON *Advancement of Learning* 26a-c 73d 74a

31 S I OZA *Ethics* PART IV PROP 67-73 444d 447a PART V PROP 25-42 458d-463d

33 PASCAL *Pensées* 67 180b

35 HUME *Human Understand g* SECT I DIV I 4 451a-452c SECT V DIV 34 463d-464b

36 STERNE *T stram Shandy* 388a-417b

37 FIELDING *Tom Jon s* 35a d 182a c

38 ROUS EAU *Pol tical Econ my* 373d 374a

40 GIBBON *Decline and Fall* 644d 646a

42 KANT *Fund Prin Metaphysic of Morals* 261 d / *Pref Metaphysica Elements of Ethics* 368c d

46 HEGEL *Ph losophy f H story* PART III 303b-c

47 GOETHE *Faust* PART I [614-685] 17a 18a PART II [I 398 407] 277b

c The social role of philosophy the philoso pher and the statesman the ph losopher king

7 PLATO *Euthydemus* 83c-d / *Apology* 207a 208a / *Gorg as* 272b 273b 291 292b / *Re p bl c* K V VI 368c 383c BK VII 390b 391b 398c-401d / *Thea t tus* 525c 526a 528c 531a / *Statesma* 598b 608d / *Laws* BK I 643c d / *Seventh Letter* 801b 802c 806b

8 ARISTOTLE *Met phy ics* BK I CH 2 [982 5 19] 500b-c

9 A ISTOTLE *Eth cs* K VI CH 7-8 390a 391c BK X CH 9 434a 436a c / *P lu cs* BK VI CH 2 3 528a 530a

12 LUCR TIU *Nature of Thi gs* BK II [1-61] 15a d BK V [1113 1135] 75c d

12 AURELIU *Med tations* BK V ECT 14 274d 275a

14 PLUT RCH *Lycurgus* 32a-48d esp 47a-48c / *Num P mpil us* 59c 60b / *Solon* 64b d 77a c / *Pericles* 122d 123c / *Alcibiades* 156c 158b / *Marcus Cato* 287d 288c / *Alexander* 543b-544a 566a 567d 571b 572a / *Cicero* 717a b / *Dion* 782c 788b

15 TACITUS *Annals* BK XIV 153d 155a BK XV 172c 173d

23 HOB ES *Leviathan* PART II 164a c

24 RABELAIS *Gargantua and Pa tagruel* BK III 127b d 131a c

25 MONTAIGNE *Essays* 55d-62a

30 BACON *Advancement of Learning* 5a b 20b-26a 27c 30a c

32 MILTON *Areopagitica* 383a

35 LOCKE *Hum n Understand ng* BK III CH X SECT 8-9 293c 294a

35 HUME *Human Understanding* SECT I DIV 4 452a DIV 5 452d-453b SECT XI DIV 113 114 502d 503b

38 MONTESQUIEU *Spirit of Laws* BK XXIV 202d 203a

38 ROUSSEAU *Inequality* 345a / *Political Econ omy* 373d 374a

40 GIBBON *Decl ne and Fall* 32a b 205d 206a 284a-c 338d 339c 390d 669b-c

41 GIBBON *Decline and Fall* 40b-41a 72c 76d 77b

42 KANT *Pract cal Reason* 360d 361d

43 FEDERALIST NUMBER 49 159d 160a

46 HEGEL *Ph losophy of Right* PREF 4b 7c / *Pl losophy of History* PART II 279d 281a PART III 303b c P RT IV 360b c 363d 364c

48 M LVILLE *Moby D ck* 107a b

54 FR UD *Civil ation and Its D sco tents* 780a b

5 The character and training of the philoso pher the difficulty of be ng a philoso pher

7 PLATO *Euthydemus* 84a c / *Phaedrus* 125b-126c / *Symposium* 163a 168a 169c 172d / *Apology* 200a 212a c / *Pl a do* 223a 226c 231c 234c / *Gorgia* 271a b 273b d 291 292b / *Republ c* BK II 320b c BK V-VII 368c 401d / *Timaeus* 476 b / *Parmen d s* 491a-c / *The tetus* 525c 526b 528c 531a / *Seventh Letter* 808c 809a

8 ARISTOTLE *Posterior An lytics* BK CH 9 [76 26-30] 104d / *T pics* K VIII C 14 [163b 8 16] 222a / *He vens* BK II H 12 [29 b24 29] 383b-c / *Met phy* BK CH 2 500b 501c / *S l* BK CH [402 I 22] 631a b

9 AR STOT E *Eth cs* BK I CH 6 [I 96 II 7] 341b BK X CI 7 [1177 19-b3] 431d-432a

10 GALEN *N t al Facult es* BK I CI 14 178d 179 BK I I CH 10 207d

12 EPICTETUS *Di courses* BK I CH 8 113d 114c CH 26 131b 132b C I 29 131d 138a BK II C I I 138b d 140 CH 3 141d 142a CI 8-9 146 148c CH I 12 150a 152c CH 7 158d 161 CH 19 162 164b K III CH 2 177 178d H 19 192c-d CI 21 22 193d 201 BK IV CH 6 230b 232c CH 8 235b-237d

(5 *The character and training of the ph losopher the d fficulty of being a philosopher*)

12 AURELIUS *Meditat ons* BK V SECT 9 270b-c BK VII SECT 3 279d 280a

17 PLOTINUS *F st Ennead* TR III 10a 12b TR IV CH 4 16 14a 19b / *F fth Ennead* TR IX CH 1 2 246c d

25 MONTAIGNE *Essays* 55d 62a esp 60a-c 70d 72a 150c 151a 451a c 539d 540a

28 HARVEY *Mot on of the Heart* 268a-c / *On An m l Generat on* 331c 332a

30 BACON *Adi an ement of Learning* 16a b 26a 27a

31 DESCARTES *Discou se* 41a 67a c esp PART II-III 44c 51b P RT VI 60d 67a c

33 PASCAL *Pensées* 4 172b

35 HUME *Human Understanding* SECT I DIV 6 453b-c

37 FIELDING *Tom Jo es* 81c 82a

40 GIBBON *D cl ne a d Fall* 31d 32b 644b-646a

41 GIBBON *Decline nd Fall* 526c 527a

42 KANT *Practical Reason* 337a 338b

46 HEGEL *Ph l sophy f R ght* PREF 1d 2a

47 GOETHE *Faust* PART I [614-685] 17a 18a [1868 2050] 44b-48b

6 Praise and dispraise of the philosopher and his work

6a The philosopher as a man of science or wisdom the love and se rch for truth

7 PLATO *Ph ed us* 125b 126c / *Symposium* 163a 168a 169c 172d / *Apol gy* 200a 212a c / *Ph edo* 222a 224a / *Go g a* 271a 280d 294d / *Republ c* BK II 319 320c BK V-VII 368c 401d / *Timaeus* 476a b / *Th a tetus* 528c 531a / *S ph st* 551a 552c 569 571c / *Seventh Letter* 808 809a

8 AR STOTLE *H avens* BK II CH 2 [291b24 29] 383b-c / *Metaphys* BK I CH 1-2 499a 501c

9 ARI TOTLE *Ethics* K I CH 6 [096 11 17] 341b BK VI CH 7 [141a9- 9] 390a BK IX CH 1 [1164b2-6] 417b BK X CH 7 [1 77 19-b3] 431d-432a / *Pol t s* BK VII CH 2 [1324a24-34] 528b

10 G LEN *N tu al F culties* BK III CH 1 207d

12 LUCRETIUS *Natur of Things* K I [62 9] 1d 2a BK III [1 30] 30a b K V [-54] 61a d BK VI [1 41] 80a d

12 EPICT TUS *D scour es* K II CH 22 167d 170a CH 24 172d 174b BK I I CH 9 184c 185d CH 21 22 193d 201a BK IV CH 5 228 230b

12 AURELIUS *Medit t ns* K V SE T 9 270b c

14 PLUTARCH *M c llus* 252a 255

17 PLOTINUS *First E n ad* TR I 10a 12b / *Fifth Ennead* TR IX CH 1 2 246 d

18 AUGUSTINE *Conf s* BK II par 8 14d 15a / *City of G d* BK VI H 3 266 d 1 10 271a d

25 MONTAIGNE *Essays* 55d 62a 70d 72a 150c 151a 446d-450a

28 HARVEY *Motion of the Heart* 268a-c / *On Animal Generation* 331c 332a

30 BACON *Adi ancement of Learning* 1a 28d esp 17b 27c

31 DESCARTES *Discourse* PART I 41d-42a 43d 44a PART III 50b 51a PART VI 60d-6 a,c esp 66d 67a c

33 PASCAL *Pensées* 261 221a 327 231a b

35 LOCKE *Human Understandi g* 87a b

35 HUME *Human Understanding* SECT I 4 ... 455b passim esp DIV 2 451b-c DIV 5 10 452d-455b

41 GIBBON *Decline and Fall* 526c 527a

42 KANT *Practical Reason* 337c 338b / *Pref Metaphysical Elements of Ethics* 365b [fn 1]

46 HEGEL *Philosophy of Right* PREF 1d 2a

6b The philosopher and the man of opinion sophistry and dogmat sm idle disputation perpetual contro ersy

5 ARISTOPH NES *Clouds* 488a 506d esp [95-267] 489a-491a [412 476] 493c-494b

7 PLATO *Laches* 36a / *Protagoras* 42a-43b / *Euthydemus* 65a 84a c / *Gorgias* 271b-2 3b / *Republ c* BK I 300b 301c BK VI 379 d / *Theaetetus* 518d 519a 525d 526b / *Soph* 551a 579d

9 ARISTOTLE *Ethics* BK IX CH 1 [1164a22 b6] 435d-417a b BK X CH 9 [1180b29-1181b12] 435d-436a c

10 GALEN *Natural Faculties* BK I CH 13 1 ... 178d 175a CH 14 15 177a 179d esp CH 14 178d 179a BK II CH 9 199a c

12 EPICTETUS *Discourses* BK I CH 8 113d 114c CH 25 26 129d 132b BK II CH 17 158d 161a CH 19-20 162c 166c BK III CH 2 177c 178d CH 21 193d 195a BK IV CH 8 235b-237d

14 PLUTARCH *Marcus Cato* 287d 288c / *Alex ander* 566a 567d

23 HOBBES *Leviathan* PART I 49d 54b 56d 57c d 59a 60a 71a b 84a P RT II 163a b PART IV 267a 274d pass m 276c

24 RABELAIS *Gargantua a d Pantagruel* BK I 12d 18b 24a BK II 78b 80d 101b 106a 124d 125b BK III 197b 200d

25 MONTAIGNE *Essays* 55d 62a 74d 77d 89c d 239d 294b passim esp 240c 246a 257d 264a 276b 278a 448d 449a 517b-519a

30 BACON *Advancement of Learning* 1 28d esp 2c 17b 57d 58b 66c 67c / *Novum Org um* ... BK I APH 44 110a b APH 54 111c d APH 71 117a-c 112a APH 62-65 113b 114c APH 71 117a-c 16d 17a

31 DESCARTES *Rules* II 2 3b X 16d 17a ... 46b *D scourse* PART I 43d 44b P RT II 46b PART VI 64a c

33 PASCAL *Pensées* 327 231a b

35 LOCKE *Human Understand ng* 89a c BK III CH VI ... CH IV SECT 7 11 260d 262b passim CH ... SECT 24 274c CH VIII SECT 2 284c 285a CH X SECT 2 291d 292a SECT 6-14 293a 295a

BK IV CH III SECT 30 323a-c CH VII SECT II 341a d CH VI I SECT 9 347d 348a
5 BERKE EY *Human Knou ledge* INTRO SECT 17 409d 410a SECT 20 411a S CT 85 429c SE T 88 430a b SECT 97 431d-432a SECT 143 441c d
5 HUME *Human Und rstand ng* SECT I D V 6–7 453b 454a passim SECT VIII DIV 62–63 478c d SECT X I DIV 13 509d
16 STERNE *Tri tram Shand* 227a 228a 234b 236b 318b 321a 329b 336a 421b 422b
19 S ITH *Wealth of Nations* BK V 336b 337a
10 GIBBON *D cline and Fall* 159a d
11 GIB ON *Decl and F ll* 299a b 526d 527a
12 K NT *Pure Reason* 36a 37d esp 36d 37b 120c 121 187c 188b 221c 222b / *Fu d Pr Metaphysic f Mo als* 260d 261d / *Pr ctical Reason* 299d / *Judgement* 607d 608c
16 H GEL *Ph losophy of Right* REF 2d 4a
17 GOETHE *Faust* PART I [1908 1963] 45b 46b [4343 4366] 107a b ART I [7843 7846] 191a
51 T LSTOY *W a and Peace* BK VI 243b
53 JAM S *Ps hology* 227b 235b
54 FR UD *New Introductory Lect* 874 875b esp 875a 877b c

The philo opher s a m n of reason the limits of eason it supplement t on by exper ence o faith

16 PTO EMY *Alm gest* BK I 5a 6a
18 AUGUSTINE *Conf ssio s* BK I par 8 14d 15a BK IV par 30–31 26b 27a BK V p 3–5 27 28 BK VI par 6–8 36c 37c / *City f God* BK XI CH 2 323 c K XVI I CH 41 495b 496c BK XIX CH I 4 507a 513c
19 AQUIN S *Summa The log a* PART Q I A I 3b-4a Q 2 A R 11d 12c Q 12 A 12 60d 61 Q 3 A I 175d 178a Q 46 A 2 253a 255a
21 D NT *D ne C medy* PURGATORY [16–45] 56a b PARADISE XXIV [52–8] 143b c XXIX [70– 6] 151a c
25 MONTAI N *Ess y* 208a 294b esp 208d 209c 212a 215a 238c 239c 257d 264a 267c 268 271b 273b
30 BACON *Ad n ment of Learn g* 2 -4c 96d 97b / *Nov um Organum* BK APH 65 114b A H 95 126b c
31 DESC RT S *R les* II 2a 3b VIII 13 14a / *D o* 41a 67a c esp PART I 43c PART III 48b 51b
33 PA C L *Pens es* 77–79 186a 84 41 205a 217b pa m 245 218b 248 219a 65 290 221b-225 4 5–4 8 243b 244b 434 435 248a 251a 56 –567 272b 273b 585–588 277a b / *Geom tric l Dem n trat* 440a b
35 LO KE *H m n Under tand g* NTRO 93a 95d
35 BERK LEY *Hum n K o ledge* INTRO SECT I 4 405 d
35 HUM *Human U derst d g* SECT I 451a 455b pass m esp DIV 2 451b-c DIV 7–10 453c 455b SECT IV DIV 26 460b c SECT V DIV 34 463d-464b SECT VIII DIV 81 487a SECT XII DIV 116 503d 504a DIV 129–130 508a d
37 FIELDING *Tom Jones* 379c 380a
40 GIBBON *Decline and Fall* 186a d esp 186c 200c 201b 308b 309b 390d
42 KANT *Pure Reaso* 129c 173a esp 133c d 217d 218a 219 220b 227a 235a esp 231c 232a / *Fu d Prin Met physic of Morals* 285 287d / *Pr ctical Reason* 291 292a 296a d 320c 321b 337a 355d / *Judgement* 497a-498b 551a 552 570b 572b 575b c 588 607c
47 GOETHE *Faust* PART I [354–514] 11a 14b [614–807] 17a 21a PART II [10 113 121] 246b 247a
48 MELVILLE *Moby D ck* 307a
51 TOL TOY *War and Peace* BK VI 242c 243b BK IX 361d 365c
52 DOSTOEVSKY *Brothers Karama ov* BK XI 337a 346a

6d The philosopher as a m n of theory or vision neglect of the practical w th dr wal from the affairs of men nd the marketpl ce

7 PLATO *Protagoras* 54c 55a / *Symposium* 149d 150a / *Apology* 200a 212a c / *Gorg as* 272b 273b 291 292b / *Republic* BK VI 375b 376c BK VII 390b 391b / *Theaetetus* 528c 531a
9 ARISTOTLE *Eth cs* BK II CH 4 [1105^{b}5 19] 351a b BK VI CH 7 [1141 34–^{b}8] 390b c / *P l t cs* BK I CH I [I 59 5 21] 453b
12 EP CTETUS *Di cours* BK CH 22 127c 128 CH 26 131b 132b BK I CH 6 181d 182b H 22 195 201a BK IV CH 213a 223d CH 8 235b 237d
14 PLUTARCH *Per le* 130c d / *Marcellus* 252a 255a
25 MONTAIGNE *Essays* 55d 57b 63d 75a 327b d 478c 482b 514a c 538 543
30 BA ON *Adv ncement of Lear ng* 1a 28d esp 2 17b 30b c 73d 74c
35 B RKELEY *Human Knowledge* ECT 97 431d 432 SECT 9 436c
35 HUM E *Hum n Understa d ng* SECT D V 2 4 451b-452c SECT V DIV 34 463d 464b
36 SWIFT *Gulliver* PART I 78b
36 ST RN *Tr str m Shandy* 421b
38 ROUS AU *I qu l ty* 345a / *Political E my* 373d 374a
39 S TH *W lth of Natio s* BK V 335d 337a
42 KANT *Pu Reas n* 187c 188b / *Fund Pri M taphys c f Mor ls* 263b 264a 266a b / *P a tical R on* 304d 305a 320 321b 358a / *P ef M t pl ysi al Elements f Eth s* 365b / *Judgem t* 607d 608
43 MILL *Repr s t t e G er ment* 346c 347
46 H G L *Ph l ophy f Right* R 5c 6a / *Phil s phy f H t ry* PART 303b-c

Praise and dispraise of the philosopher and h s work 6d The philosopher as a man of theory or vision, neglect of the practical withdrawal from the affairs of men and the marketplace)

48 MELVILLE *Moby Dick* 116a 117a 255a
50 MARX ENGELS *Communist Ma ifesto* 430d 432a
51 TOLSTOY *War and Peace* BK IX 361d 365c
53 JA ES *Psych logy* 271a b
54 FREUD *Inhibitions Symptoms and Anxiety* 722a b

Observations on the history of philosophy the lives of the philosophers in relat on to their thought

7 PLATO *Protagoras* 54c 55a / *Apology* 200a 212a c / *Phaedo* 240d 242b / *Sophist* 564c 568a / *Seventh Letter* 800a 814d
8 ARISTOTLE *Sophistical Refutations* CH 34 [183b16-184b8] 253a d / *Physics* BK I CH 2-9 259b 268d / *Heavens* BK I C 1 10 [279b4 12] 370d BK III CH 7 [306a6-18] 397b c / *Meta phys cs* BK I CH 3 [983a24]-BK II CH 1 [993b19] 501c 512a BK XI C 1 6 590d 592b BK XII C1 8 [1074b1 14] 604d 605a CH 10 [075a25 1076 4] 606a d / *Soul* BK I C 1 2-5 633a 641d
9 ARISTOTLE *Parts of Animals* BK I CH 1 [642 25 30] 165b-c / *Eth cs* BK I CH 6 341b 342c / *Pol t cs* BK I CH 11 [1259a5 21] 453b c
10 GALEN *Natural Faculties* BK III CH 10 207b d
12 LUCRETIUS *Nature of Th gs* BK I [62-79] 1d 2a BK III [1-30] 30a b BK V [-54] 61a d BK VI [1 34] 80 c
12 EPI TETUS *D sc urses* BK II CH 12 151b-152c BK III CH 2 177c 178d CH 6 182a CH 21 2 193d 201a
14 PLUTARCH *Solo* 65c d / *Themistocles* 88d / *Pericles* 122d 123c / *Marcellus* 252a 255a / *Marcus Cato* 287d 288c / *Sulla* 381c / *Lu cullus* 420b d / *Nicias* 435b d / *Alexan der* 543b 544a / *C cero* 705b c 720a b
15 TACITU *Ann ls* BK X V 153d 155a BK XV 172c 173d
18 AUGUST NE *City f God* BK V II CH I 12 264b d 273a K XVI I CH 37 493c-494a CH 41 495b-496c BK XIX CH 1 3 507a 511a
19 AQUI AS *S mma Theolog ca* RT I Q 22 A ANS 128d 130d Q 44 A 2 AN 239b 240a Q 65 A 4 NS 342b 343c Q 66 A 1 343d 345c A 2 ANS 345d 347b Q 75 A I ANS and E 1 2 378b 379c Q 76 A I ANS 385d 388c A 3 AN 391a 393 A 4 REP 4 393a 394c Q 79 A 4 NS 417a-418c Q 84 A I ANS 440d 442a A 2 ANS 412b 443c A 4 ANS 444d 446b A 6 AN 447c 449a Q 85 A 2 AN 453d-455b Q 88 A ANS 469a-471c
20 AQU S *Summa Th olo ca* P RT I I Q 95 A 3 228c 229b Q 97 A I ANS 236a d
23 HO S *Levi th n* PART I 164a c P RT IV 267c 269b 274c d 276c CONCLUSION 282c d
25 MONTAIGNE *Essays* 65b 66b
28 H RVEY *Motion of the Heart* 267b d 268d 279d 280c / *On Animal Generation* 336d 337a c
30 BACON *Ad ancement of Learning* 1a 101d esp 2c 5a 7b c 9a b 14a 15a 15c d 16c 22a b 23a b 24c 29b c 30d 31a 39d-48d, 54b-61d 69d 76a 81d 85a 97b-c / *Novum Org num* BK I APH 38 105 109c 128c esp APH 56 112a APH 78 119b c, APH 95-96 126b c
31 DESCARTES *D scourse* 41a-67a c / *Medita tions* 70a / *Objections and Replies* 278a 293a c
33 PASCAL *Vacuum* 355a 358b
35 LOCKE *Human Understanding* BK III CH IV SECT 7 10 260d 261d CH VIII SECT 2 284c 285a CH X SECT 2 291d 292a SECT 6-14 293a 295a BK IV CH III SE T 3 323a c CH VII SECT 11 341a d CH XVII SECT 4 373a b
35 BE KELEY *Human Knowled e* INTRO SECT 17 409d 410a SECT 85 429c SECT 88 430a b SECT 119 436c SECT 143 441c d
35 H ME *Human Understandi g* SECT I DIV 4 451d 452a DIV 453a b DIV 8-9 454b-4 5a SECT V DIV 34 463d-464b SECT VII DIV 48 471b c SECT XI DIV 102 497b d SECT XII, DIV 122 505d [fn 1]
38 MONTESQUIEU *Spirit of Laws* BK XXI, 169a b BK XXIV 202d 203a
38 ROUSSEAU *Inequality* 329a 334a c / *Political Economy* 373d 374a
39 S ITH *Wealth of Nations* BK I 5d 6a BK V 335b 337b 338d 339a
40 GIBBON *Decline a d Fall* 12d 13b 23d 24a 31d 32b 159a d 186a c 204d 206d 30 b-308c 364 d 644b 646a 668d 671b
41 GI BON *Decl ne and Fall* 40b d 299a b 326b 327a 522b 528a c passim esp 5 6c 527a
42 KANT *Pure Reason* 1a 8b esp 5b 5d 6d 100a d 101d 102a 177b 179b 218d 2b 224a 227a 248d 250a c / *Fund Prin Meta ph ysic of Morals* 273d 274a / *Practical Re so* 299d 307a d 311d 313d 317b-318b 327c d 332c d 335b c 339b-d / *Judgement* 485b 486d 513d 514b 551a 552c 580c-d 600d 601c
43 FED RAL ST NUM ER 9 47a d
43 MIL *Liberty* 274b 293b passim / *Util tar an sm* 445a b
46 H GEL *Ph lo ophy of Right* PREF 2d 5c / *Ph losophy of H story* INTRO 158a 159a PART I 218c d 229b d PART II 279d 81a PART III 303 c 308c 309d PART IV 341c 342a 363d 364c
48 MELV LL *Moby Dick* 243a
50 MARX *Cap t l* 25c d 190d [fn 2] 301c esp 301d [fn 3] 305a 306b [fn 2]
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53 J MES *Psychol gy* 221a 239a 305a 312a 627a 635a 879b 882a

CROSS-REFERENCES

For: Another discussion of the nature of philosophical science, *see* SCIENCE 1a, 1c; and for various conceptions of the highest philosophical knowledge, *see* DIALECTIC 2a; KNOWLEDGE 6c(4); METAPHYSICS 1; WISDOM 1a.

The relation of philosophy to theology and religion, *see* RELIGION 6g; SCIENCE 2a; THEOLOGY 4a; TRUTH 4a.

The relation between philosophy and mathematics, *see* MATHEMATICS 1a–1b; PHYSICS 1b.

The relation of the philosophical to the experimental and empirical sciences, *see* PHYSICS 2–2b; PROGRESS 6b; SCIENCE 1c.

The comparison of philosophy, poetry, and history, *see* HISTORY 1; POETRY 5b; SCIENCE 2b.

Discussions relevant to the distinction between theoretic and practical philosophy, *see* JUDGMENT 2; KNOWLEDGE 6e(1); MIND 9a; PRUDENCE 2a; SCIENCE 3a; THEOLOGY 3b, 4d; TRUTH 2c; WISDOM 1b.

Other treatments of the branches of speculative or natural philosophy and their relation to one another, *see* DIALECTIC 4; LOGIC 1; MAN 2b–2b(4); MATHEMATICS 1a; METAPHYSICS 3a–3c; PHYSICS 1–1a; SCIENCE 1a(2); THEOLOGY 3a; TRUTH 4c.

Other treatments of the branches of practical, moral, or civil philosophy, *see* KNOWLEDGE 6e(2), 8a–8c; LOGIC 4e; POETRY 8; SCIENCE 3a; STATE 8d; WEALTH 9.

Discussions relevant to the method of philosophy, *see* DEFINITION 6a–6c; EXPERIENCE 2c, 4a–4b; INDUCTION 1a, 3; KNOWLEDGE 6c(4); LOGIC 4d; METAPHYSICS 2c, 4b; PRINCIPLE 3–4; REASONING 6a, 6c–6d.

The uses of philosophy in the conduct of life and the organization of society, *see* HAPPINESS 2b(7); WISDOM 2c.

The conception of the philosopher as a man of wisdom or as seeking wisdom, *see* TRUTH 8e; WISDOM 3; and for the comparison of philosophical with supernatural wisdom, *see* THEOLOGY 2; WISDOM 1d.

The association or contrast of the philosopher with the sophist, the rhetorician, or the dogmatist, *see* DIALECTIC 6; METAPHYSICS 4a; OPINION 4b; RHETORIC 1a; WISDOM 3.

The comparison of progress in philosophy and science, and for the conditions of progress in philosophy, *see* PROGRESS 6b–6c.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.

II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

I.

AUGUSTINE. *Soliloquies*, BK I, C 1–7
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AQUINAS. *On the Trinity of Boethius*, QQ 2, 5–6
DANTE. *Convivio* (*The Banquet*), SECOND TREATISE, CH 12–16; THIRD TREATISE, CH 11–15; FOURTH TREATISE, CH 1
DESCARTES. *The Principles of Philosophy*, PREF
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—— *A Pluralistic Un erse* L CT I
—— *Some Problems of Philosophy* CH I

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—— *Apology*
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—— *De la ph losophie chrét enne*
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—— *Scholasticism and Pol tics* CH 2
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Chapter 67 PHYSICS

INTRODUCTION

CONCERNING the subject matter of physics one thing seems to be tradition ally taken for granted The object of its study is the sensible world of changing things or mat ter in motion When Plato for example con ceives astronomy as dealing not with the actual and observable motions of the heavenly bodies but with the possible forms of the motions of solids he gives it the character of a mathemat ical rather than a physical science He asso ciates it with geometry as for a similar reason he associates music—divorced from concern with audible harmonies—with arithmetic In anyone s view if a science does not investigate sensible realities if it does not undertake to ac count for the motions of actual bodies or stated most generally if it has no concern with the phenomena of change then it does not have the character of physical or natural science

The early Greek physicists the pre Socratics to whom Plato and Aristotle refer inaugurate the study of change with speculations about ultimate origins the underlying principles or causes of natural phenomena Sometimes they are called philosophers and sometimes scientists —or at least precursors of empirical science But there seems to be no difference of opinion about their title as physic sts Their undisputed claim to this title derives not from the method they employ but from the object they study—*change* In that primary meaning of the word nature which comes from the Latin *natura*—the equivalent of *phusis* in Greek—they can be called naturalists or physicists indif ferently The realm of nature is the realm of change

It is for this reason that Aristotle consider ing the theories of his predecessors in the open ing chapters of his *Physics* sets Parmenides apart from all the rest Parmenides affirmation of the un ty of being which leads to his denial of the reality of change or motion cannot be treated as a physical theory On the contrary it is according to Aristotle a complete negation of the subject matter of physics No matter what other points physicists may dispute among themselves they must all at least agree in taking a stand against Parmenides Aristotle does not even seem to think that a book on physics is the proper place to argue against Par menides That argument belongs to another part of philosophy The reality of change seems to him sufficiently evident to assure the physicist that he has a subject matter to inves tigate

THE QUESTION whether the early physicists were sc ent sts or philosophers calls attention to different methods of investigating natural phe nomena Agreement on the subject matter of physics may prevail therefore only in very general terms When in a manner to accord with the method employed the object of phys ical inquiry is more specifically defined there seem to be two physics not one—a philosoph ical and a scientific physics a philosophy of na ture and a natural science or to use Kant s phrasing a rational or pure physics and an empirical or experimental physics

Though Newton may call his work a philos ophy of nature he also refers to it as an experi mental philosophy in order to distinguish it from the work of earlier natural philosophers who did not perform experiments The differ ence between the physi s of Newton and that of Aristotle seems however to involve more than a divergence in method The problems which Newton and Aristotle try to solve indi cate a difference in subject m tter as well Nevertheless this diff ence falls w th n what in the most general term mu t be conceived as the domain of phys cs For all their

ences both are physicists though both are not philosophers or scientists in the same sense

There are other sources of variation in the definition of physics The problem of the relation of physics to other disciplines—whether thes are other branches of philosophy or other fields of empirical research—raises issues about the object and scope of physics Aristotle Bacon Descartes and Kant for example do not seem to have a common understanding of the relation of physics to mathematics and metaphysics In consequence they conceive physics itself differently

On the level of empirical research physics is sometimes regarded as just one of the natural sciences and sometimes as the whole group of natural sciences In the latter case it includes such fields as astronomy mechanics optics acoustics thermodynamics magnetism and electricity and sometimes chemistry biology and even psychology are included under the head of physical or natural sciences contrasted in the broadest terms to the social sciences The conception of physics obviously changes when its scope is determined by a boundary line which separates it from chemistry or from biology and psychology or from the study of society

The separation of these other sciences from physics does not necessarily imply a discontinuity in nature or the natural sciences The biologist and the psychologist for example consider the physical bases of life and the physical conditions or correlates of mental phenomena Hybrid sciences like biophysics and psychophysics have developed Even the study of society draws upon physics to the extent that the laws of matter in motion and considerations of space and time must be appealed to for an understanding of the physical foundations of economic and political life

OTHER CHAPTERS DEAL with specific physical sciences e g ASTRONOMY and MECHANICS The latter tries to cover the various branches of mechanics and related fields of study such as dynamics opt cs the theory of heat magnetism and electricity particularly so far as these are represented in the work of Galileo Newton Huygens Gilbert Fourier and Faraday The basic concepts of mechanics and its branches or affiliates are also treated in that chapter Still other chapters deal with fundamental terms representing concepts or problems in the larger domain of physics philosophical or scientific e g CAUSE CHANGE ELEMENT INFINITY MATTER PRINCIPLE QUANTITY SPACE and TIME—not to mention NATURE and WORLD terms which represent in the most comprehensive way the reality studied by the physicist

Our discussion here can therefore be restricted to the problems raised in the great books concerning the conception of physics its subject matter and method its relation to other sciences or other parts of philosophy It will lead to such questions as whether physics is supreme among the sciences studying reality or the nature of things and at the other extreme whether physics is at all possible as a science whether there can be scientific knowled e of bodies in motion or of the whole realm of change and becoming

The problem of the distinction between philosophical and scientific physics would appear to be only a special case of the distinction between philosophy and science in general But it is more than that It is the case which tests the main distinction itself since here both philosopher and scientist claim to be expounding the same subject matter or at least to be dealing with the same general field of phenomena

Mathematics and metaphysics bear on the distinction between philosophy and science in a different way If for example we take experimentation or empirical research to be characteristic of science in distinction from philosophy then mathematics would seem to resemble philosophy rather than science On no understanding of the nature of mathematical knowledge is mathematics ever divided into two kinds which are capable of bein described as empirical and rational The possibility of metaphysical knowledge may be challenged but no one has ever proposed an experimental metaphysics to challenge the metaphysics of the philosophers

But physics seems to permit both an experimental and a philosophical treatment Whether they are to be regarded as in conflict with one another depends on whether they are attacking

the same problems by different methods or whether they represent something like a divi sion of labor In the latter view each would deal accordin, to its method with different problems and tend to supplement rather than to exclude the other Psychology is another subject matter which seems to receive a dual treatment—philosophical and experimental—in the tradition of the great books It raises issues similar to those just mentioned They are considered in the chapter on MAN

As the chapters on PHILOSOPHY and on SCIENCE indicate the discussion of their differ ence from and relation to one another is com plicated by the double use of both terms The word science for example is used for both the philosophical and the experimental sciences throughout the greater part of the tradition Similarly until quite recently the name of philosopher is taken by those who experiment as well as by those who do not

It is impossible therefore to speak without confusion of a scientific and a philosophical physics unless the verbal ambiguities are re solved by some convention such as the under standing that when the context indicates that the words science and philosophy are be ing used as opposites rather than as synonyms then science shall signify the experimental and philosophy the non experimental mode of treatment Beyond this it is necessary to proceed as if the chapters on PHILOSOPHY and SCIENCE formed a background for some of the matters to be discussed here Otherwise the consideration of natural philosophy and natural science would tend to become a general dis cussion of philosophy and science

THE GREAT BOOKS of experimental physics seem to have three characteristics in common First and most naturally they insist upon ex perimentation as either the ind spensable source or the ultimate test of scientific formulations Second they tend to rely upon mathematics as much as upon experiment both for the formu lation of nature s laws and for the demonstra tion of the consequences or corollaries of the primary laws Third though expe iments and observations multiply as science develops they seek to bring all the phenomena of nature un der the smallest number of generalizations which have the utmost simplicity in mathe matical statement

On the second and third points Newton s declarations seem to be most explicit Nature he says is pleased with simplicity and affects not the pomp of superflous causes Accord ingly Ne vton directs his efforts toward the simplest statement of the laws of motion and these he seeks to give the universality requisite for covering every type of natural phenomenon At the opening of the third book of the *Mathematical Principles of Natural Philosophy* he ex plains that in the preceding books he has laid down the principles of philosophy prin ciples not philosophical but mathematical such namely as we may build our reasonings upon in philosophical inquiries These princi ples are the laws and conditions of certain mo tions and powers or forces From these same principles he will now undertake to demon strate the frame of the System of the World

In the Preface to the first edition of this work Newton describes the third book as one in which he derives from the celestial phe nomena the forces of gravity with which bodies tend to the sun and the several planets Then from these forces by other propositions which are also mathematical he goes on I deduce the motions of the planets the comets the moon the sea But he does not consider h s work to have attained the goal of physics—the compre hension of all natural phenomena by a few simple mathematical formulae

His confession of failure may also be read as a prognostication of what an experimental physics based on mathematical principles might some day be able to achieve I wish we could derive the rest of the phenomena of na ture by the same kind of reasoning he writes for I am induced by many reasons to suspect that they may all depend upon certain forces by which the particles of bod es by some causes hitherto unknown are either mutually im pelled towards one another and cohere in regular figures or are repelled and recede from one another Einstein s unified field equations covering both gravitational phenomena on the astronomical scale and the electrical attract ons and epulsions of sub-atom p rt cl s seem to realize or at least closely to approximate the ideal Newton has n m nd

Midway between Newton and Einstein Fourier also bears testimony to the ideal of physics as a science at once simple in its principles and universal in the scope of their application The successors of Newton and Galileo he writes have extended their theories and given them an admirable perfection they have taught us that the most diverse phenomena are subject to a small number of universal laws which are reproduced in all the acts of nature It is recognized that the same principles regulate all the movements of the stars their form the inequalities of their courses the equilibrium and the oscillations of the seas the harmonic vibrations of air and sonorous bodies the transmission of light capillary actions the undulations of fluids in fine the most complex effects of all natural forces Thus has the thought of Newton been confirmed he concludes referring to Newton s praise of geometry whose glory it is that the few mathematical principles it provided for use in physics should have been able to produce so many things

ON THE EXPERIMENTAL SIDE the great works of physical science seem to contain diverse notions of the purposes served by experimentation accompanied by a fairly uniform recognition of the dependence of natural science upon experiment In the field of magnetism for example Gilbert sets aside as unscientific all those authors who have written about amber and jet as attracting chaff but with never a proof from experiments These writers deal only in words Such philosophy bears no fruit The fruitfulness of experiments on the vacuum the equilibrium of fluids and the weight of air leads Pascal to conclude that the secrets of nature remain hidden until the experiments which supply us with knowledge about it can be performed and multiplied

We ought never to search for truth but by the natural road of experiment and observation writes Lavoisier and Faraday describes himself as an experimentalist who feels bound to let experiment guide me into any train of thought which it may justify The science of electricity he finds is in that state in which every part of it requires experimental investigation not merely for the discovery of new effects but ultimately for the more accurate determination of the first principles of action of the most extraordinary and universal power in nature

Methods of experimentation necessarily differ in different fields of physical research. Newton s optical experiments with mirrors and prisms were adapted to the phenomena of light, as Galileo s experiment with the inclined plane Pascal s experiment on the equilibrium of fluids or Faraday s experiments with induction coils were adapted to the phenomena of dynamics hydrostatics and electricity The materials employed the apparatus or instruments devised the factors controlled or isolated from irrelevant circumstances and the units of measurement in which the results are recorded naturally vary with the phenomena under observation Yet one thing is common to the variety of experiments described in the great books of physical science They all involve the construction of an artificial physical system which permits more accurate and refined observation than does nature uncontrolled or untampered with

The student of nature must observe in any case no matter whether he is a philosopher or a scientist To say that philosophical physics is non experimental does not mean for Aristotle that knowledge of nature is possible without observation or induction from experience But the experimentalists insist upon the distinction between the kind of observations which men normally make in the course of everyday experience and the kind which involve the special experience enjoyed only by those who observe and in addition measure the results of specially contrived experiments

This point of distinction seems to be strikingly illustrated by a passage in Galileo s *Two New Sciences* One of the persons in the dialogue Simplicio declares everyday experience to show the propagation of light to be instantaneous He explains that when we see a piece of artillery fired at a great distance the flash reaches our eyes without lapse of time but the sound reaches the ear only after a noticeable interval Sagredo replies that this familiar bit of experience permits him to infer only that sound in reaching our ear travels more slowly than light It does not inform us he says whether the coming of light is instanta

neous or whether althou_h extremely rapid it still occupies time The choice between these alternatives could not be determined by ordinary experience An experiment had to be constructed in order to measure the velocity of light

Recourse to experimentation to find by ob servation and measurement the answers which ordinary experience fails to yield does not ex haust the uses of experiment The great experi mental physicists indicate at least three distinct uses to which experiments can be put in addi tion to a merely exploratory use for the dis covery of new effects

In natural philosophy as in mathematics writes Newton the method of analysis ought ever to precede the method of composition or synthesis In physics the method of analysis consists in making experiments and observa tions and in drawing conclusions from them by induction In contrast the synthetic meth od begins with the principles *assumed* there- from explaining the phenomena and prov ing the explanations

Here experiments perform a probative rather than an inductive function As Huygens ob- serves proof in physics does not have the certi tude of mathematical demonstration but it can have an extremely high degree of probability — very often scarcely less than complete proof' —as a result of the experimental con firmation of a conclusion deduced from the assumed principles This occurs when things which have been demonstrated by the prin ciples that have been assumed correspond per fectly to the phenomena which experiment has brou_ht under observation especially when there are a great number of them A single crucial experiment so perfect in construction that all relevant factors have been controlled makes unnecessary the multiplication of experi ments to establ sh the conclus on

A third use of experiment is illustrated by Galileo when he measures the velocity of a ball rolling down an inclined plane in order to de cide whether a certain mathematical definition of uniformly accelerated motion describes the acceleration which one meets in nature in the case of falling bodies The persons in the dialogue seem to be satisfied with some mathe matical reasoning which shows that the velocity increases with the units of time elapsed rather than with the intervals of space traversed But when Simplicio asks for an experiment to show that the mathematical conclusion has physical reality in the sense of describing observable phenomena Salviati replies that this request is a very reasonable one for this is the custom —and properly so—in those sciences where mathematical demonstrations are applied to natural phenomena and where the principles once established by well chosen experiments become the foundations of the entire super structure Here experiment does not confirm conclusions It establishes principles not by inductive generalization but by comparing actual measurements with mathematical ex pectations

WITHOUT EXPERIMENT but not without induc tions from experience without measurements but not without recourse to observation Aris totle s *Phys cs*—and with it such physical treatises as his works *On the Heavens* and *On Generation and Corruption*—represents a phi losophy of nature In Aristotle s meaning of the term science these treatises expound sciences but they also constitute one part of philosophy to be distinguished from mathematics and from what Aristotle regards as the first or highest part of philosophy *i e* the science of meta physics

Aristotle s tripartite divis on of the theoretic sciences or speculative philosophy into physics mathematics and metaphysics raises a question concerning his numerous biological works and perhaps also his treatise *On the Soul* Are these to be classified as physical sciences or parts of natural ph losophy? The fact that Aristotle distinguishes between the forms and properties of living and non living matter does not seem to affect the answer By h s criteria of phys cal inquiry—namely that it investigates what nei ther ex sts nor can be conceived apart from matter and motion and that it is concerned with every type of change—all these works be long to the domain of physics Accordingly even such apparently psychological stud es as those dealing w th sensation memory dreams justify the t tle under wh h th y have been traditionally grouped—*Parva N tur l a i e* short phys cal treatises

For all these more specialized considerations of natural phenomena the *Physics* seems to serve as a general introduction as well as being in its own right an exposition of the most fundamental science in the sphere of natural philosophy It tries to define change and to state the principles underlying every type of change It tries to classify the types of change separating coming to be and passing away simply (or generation and corruption) from coming to be in a special respect (or change in quality quantity and place) which Aristotle usually calls motion in distinction from becoming or generation It undertakes to analyze the conditions or causes of change or motion to distinguish what happens by chance from what happens of necessity to discriminate between natural and unnatural or violent motions to treat the relation of mover and moved to deal with the continuity and divisibility of motions to consider place and time as conditions or aspects of motion and to ask about the infinity of body and of change and about the eternity of motion or the whole order of becoming the natural world of things in motion

Aristotle s physics thus seems to stand in sharp contrast to the physics of the experimentalists not merely in method but in the questions it tries to answer and in the principles to which it appeals The effort to define change in general and to state the principles and causes operative in every type of change might appear to correspond to the search for formulae of maximum generality to cover all natural phenomena But where Newton and Fourier hope thereby to reduce nature s variety to the simplest terms—a few laws of motion comprehending the whole framework of nature—Aristotle tends on the contrary to insist upon an irreducible variety of types of motion kinds of matter and causes of change

Furthermore the principles to which Aristotle appeals are not mathematical He criticizes the discussion of becoming which takes place in Plato s *Timaeus* on the ground that it tries to substitute mathematical for physical terms in the analysis of change Physical bodies contain surfaces and volumes lines and points he writes and these are the subject matter of mathematics but the mathematician is not concerned with these things as the attributes of physical bodies but only as separated in thought at least from matter and motion There are sciences which represent mixtures of mathematics and physics such as optics and harmonics but the existence of these mixed sciences—the equivalent of what is later called mathematical physics —seems to Aristotle to imply rather than deny the separation of purely physical science from pure mathematics

Where Newton (who can be taken as the exemplary author of a physics which is at once mathematical and experimental) goes to mathematics for the principles of natural philosophy Aristotle seems to think that physics has its own proper principles If any deeper understanding of these principles is sought it is not to be found in mathematics but in metaphysics or what Aristotle calls the first philosophy

For example matter form and privation are proposed by Aristotle as the basic physical principles In such terms he is able to state his insight that all change involves a substratum (or *that which* changes) and contraries (or that *from which* and that *to which* the change occurs) But the analysis of matter and form in terms of potentiality and actuality as modes of being and the consideration of form and privation in terms of being and non being belong to metaphysics rather than physics

Furthermore Aristotle as a physicist deals with bodies in motion and with the difference between the generation of bodies and their alteration increase and decrease or change of place But he leaves to metaphysics—to the books which come after the books on physics—the discussion of physical bodies as substances composite of matter and form and the distinction of substance and accident which bears on the difference between substantial and accidental change (*i e* generation and corruption as opposed to the change in quality quantity or place)

Though for Aristotle physics is as separate from metaphysics as it is from mathematics in subject matter physics depends upon metaphysics as it does not upon mathematics for the establishment as well as the elucidation of its principles It is in this sense that metaphysics is logically prior to physics But there may also be a sense in which philosophical physics is

logically prior to experimental natural science To the extent that the experimentalist employs physical as opposed to mathematical principles he may have to derive these from a philosophy of nature Galileo for example investigates the properties of natural and violent motions in the Third and Fourth Day of his *Two New Sciences* (*i e* the motions of freely falling bodies and of projectiles) The problem of establishing the reality of this distinction and of defining the natural and the non natural types of motion seems to be a matter of philo sophical analysis rather than of experimental investigation

BACON AND KANT appear to agree with Aris totle about the separation of physics from mathematics Rational (or pure as opposed to empirical) physics is according to Kant en tirely separate from mathematics It is not to be confused with what is commonly called *physica generalis* which is mathematics rather than a philosophy of nature Criticizing the natural philosophy of the ancients because it is corrupted by logic in the school of Aristotle and by mathematics in the school of Plato Bacon says that mathematics should terminate natu ral philosophy rather than generate or create it We may hope for better results he adds from pure and unmixed natural philosophy

Bacon elsewhere observes that the investi gation of nature is best conducted when mathe matics are applied to physics He does not deny the great use of mathematics in physics but rather insists that mathematics be regarded as an appendage or auxiliary of natural phi losophy not its master He is writing aga nst the mathematicians who would have their science pres de over physics

But to whatever extent Aristotle Bacon and Kant are in agreement concerning the re lation of physics and mathematics their the or es of the scope and subject matter of physics seem to be at var ance For Bacon phys cs is only one of the theo etic parts of natural phi losophy the other is metaphysics Both are sciences of nature or the physical world though one investigates material and efficient the other formal and final causes Both stud es moreover can be conducted experiment lly and can yield practical fru ts (in me han cs and what Bacon calls magic ') through the pro duction of effects by the application of a knowl edge of causes

For Kant the whole body of theoretical knowledge which is rational and *a priori* not empirical and *a posteriori* is the metaphysic of nature of which one part is rational physics and the other rational psychology The meta physic of corporeal nature he writes is called *physic* or because it must contain the principles of an *a priori* knowledge of nature only *rational physic* Here physics and meta physics do not have distinct objects as they do for Aristotle nor does Kant s conception of physics as purely *a priori* knowledge of nature seem to agree with Aristotle s conception of physics as inductive and empirical if not exper imental

These issues concerning the relation of physics to mathematics and metaphysics have significance for the experimental as well as the philosophical study of nature If for example following the position taken by Hume meta physical inquiry is dismissed as incapable of yielding knowledge and mathematical knowl edge is restricted to the realm of ideal entities then natural science which for Hume consists in experimental reasoning about matters of fact be omes the only knowledge of reality Even though Hume looks upon the conclusions of experimental reasoning as at best probable it remains the case that questions about nature which cannot be answered by physics cannot be answered scientifically

The effect is the same as that achieved by Hobbes who makes physics the primary science of reality on the ground that nothing exists except bod es in motion The assertion of the primacy of physics in short may be due *e ther to the denial that immaterial objects can be* known by us *or* to the den al that such objects have any real existence Of quite opposite tenor is the view that only immaterial and eternal things can be scientifically kno vn and that the sensible world of things which come to be pass away and are forever undergo ng change belongs to the realm of probab l ty and opinion not knowledge

For Plato mathemat es and d alect c n be r spectively sc ence and wisdom bec use they study th ntell g ble real ty of being in its im

mutable forms But the physicists who try to give an account of becoming in all its changing sensible app arances can do no better than adduce probabilities as likely as any others On such matters Timaeus says we ought to accept a tale which is probable and inquire no further After discoursing at length of physical matters Timaeus apologizes for the merely conjectural character of his account of natural phenomena saying that a man may sometimes set aside meditations about eternal things and for recreation turn to consider the truths of becoming which are probable only he will thus gain a pleasure not to be repented of and secure for himself a wise and moderate pastime

This view goes further than Hume s in depreciating physics by contrasting its probability with the certitude of mathematics It praises mathematics and dialectic as Hume s theory does not for something more than their certitude—for their being knowledge of reality rather than of appearances

Furthermore Hume unlike Plato does not think the probability of physics detracts from its utility the sort of utility which Bacon magnifies more eloquently than Hume—the invention of machines and the technical applications of physics whereby man extends his dominion over nature In the traditional discussion of the dignity and value of physics Plato and B co seem to represent attitudes as far apart as are the theories of Aristotle and Newton in the discussion of the subject matter and method of physics

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4a The distinction between simple observation and experimentation the art of creating ideal or isolated physical systems

4b Experimental discovery inductive generalization from experiment the role of theory or hypothesis in experimentation

4c Experimental testing and verification the crucial experiment

4d Experimental measurement the application of mathematical formulae 375

5 The utility of physics the invention of machines the techniques of ngineering the mastery of nature

REFERENCES

To find the p sages cited use the numbers in heavy type wh ch are the olume and page numbers of the passages referred to For example in 4 Ho IER *Iliad* BK II [265 283] 12d the numb r 4 is the number of the volume in the set the number 12d ind cates that the pas sage is in section d of page 12

P GE S CT ON When the text is printed in one column the letters a and b refer to the upp nd lower halves of the page Fo example in 53 JAM S *Psychology* 116a 119b the passage begins in the upper half f page 16 and ends n the lower half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the p e the letters and d to the upper and lower hal es of the right hand side of the p ge For example in 7 PLATO *Sympos um* 163b 164c the p ssage beg ns in th lower half of the left hand s de of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One or m e of the main divisions of a wo k (uch as PART BK CH SECT) are so netimes ncluded in the reference line numbers in brackets are gi en in cer tain cases *e g* *Iliad* BK II [6 83] 12d

BIBLE REFERENCES The references re to book chapter and verse When the K James and Douay vers ons diff r in title of books or in the numb ing f chapters or verses the King James vers n is cited first and the D uay indicated by a (*D*) follows *e g* OLD T TA MENT *N hemiah* 7 45—(*D*) *II Esdras* 7 46

SYMBOLS The abbreviation esp calls the reader s ttention t one or more espe ially rele ant parts of a whol efe ence passim signifies that the topic is d sc ss d int rm t te tly r ther than cont nuously in the w ks or passage cited

F r dd t onal informat n concern ng the style of the references see the Explanat o of Reference Style for gen l gu dance in the use of *The Great Ideas* consult the Preface

1 **Physics as the general theory of becom ng and the orde of n ture or ch ng philo ophical phys cs the philosophy of nature pure or t onal phy cs**

7 P ATO *Rep bl c* K VII 391b-398c / *T ma us* 447 477a

8 A ISTOTLE *Physics* BK I CH I 259a b CH 2 [184^{b}5 185 19] 259 260a CH 9 [192 33 ^{b}2] 268c d K II CH 2 270a 271a CH 7–9 275b-278a K III CH [2 ^{b}I 4] 278a CH 5 [2 4 34–^{b}3] 282b c BK V CH I [8^{a}27 33] 287 BK VI I CH 3 [253 32 ^{b}6] 337 / *He tens* BK I CH I [268 7] 359a CH 5 [27 ^{b} 8] 362 d BK II CH [98^{b}13–30] 390a b CH 7 [3 6^{b}I 18] 397b-c / *Met phy* BK I CH 9 [992^{a}29–^{b}9] 510 d BK II H 3 [995 5 0] 513d BK VI C I 547b d 548c BK VII CH I [37 0– 8] 560d BK X H 3 [1 61 29–^{b}12] 589c d CH 4 589d 590a CH 7 592b 593a / *S l* BK I CH I [403^{a}25 ^{b}19] 632b d / *Sen e and th Sen ible* C I [436 16–^{b}2] 673b / *Y uth Life d B ath g* CH 27 [48 ^{b} I 31] 726d

9 ARISTOTLE *Pa ts f An m ls* BK I H I 161a 165d esp [639^{b}3 64] 162 b

16 PTO EMY *Alm g st* K 5 6a

18 AUGUSTIN *City f God* BK V CH 2 265b-266a CH 4 266d 267c CH 5–6 268b 269c BK XI CH 25 336b d

19 AQUINAS *Summa Theologica* PART I Q A I REP 2 3b 4a

23 HO BES *Leviathan* PART I 71 d 72 d PART IV 271d

30 BACON *Adva ement of Learn g* 33b 34b 40a c 42c-43d

31 DESCARTES *Rules* XIV 31c d / *Discourse* PART VI 61b 62c / *Med tat ons* I 76 / *Objections and Repl es* 215a b 285b d

35 LOCKE *Human Understand g* K V H XX CT I– 394d SECT 5 395c

35 B RK Y *Hum n Kn wledg* SECT O I 7 432c 436b

42 KANT *Pu e Re son* 5a 13d esp 5d 6 18d 19 / *Fund Prin M t phy ic of Morals* 253 d 271a / *J dgement* 578a b

53 JA *P ycholog* 882 886a 889a 890

1a ***The r l tion of the philosophy of n ture to m taphysics and d lect c***

7 PLATO *Phaedo* 240d 242b / *Republ c* BK VI 385 388a K VII 391b 398

8 AR TOTL *Physics* BK H [84^{b}5 185 19] 259 260 CH 9 [19 33 ^{b}] 268 d K CH 2 [94^{b}8 15] 271 CH 7 [98^a 3] 275b c BK III CH 5 [4 34 ^{b}3] 282b-c K VII CH I

(1. *Physics as the general theory of becoming and the order of nature or change: philosophical physics, the philosophy of nature, pure or rational physics* 1a *The relation of the philosophy of nature to metaphysics and dialectic.*)

[250^{b}11-251^{a}8] 334a-c / *Heavens*, BK III, CH 1 [298^{b}13-30] 390a-b / *Metaphysics*, BK I, CH 8 [989^{b}21-990^{a}8] 507d-508a; BK II, CH 3 [995^{a}15-20] 513d; BK VI, CH 1 547b-d; 548c; BK VII, CH 11 [1037^{a}10-18] 560d; BK XI, CH 3 [1061^{a}29-^{b}12] 589c-d; CH 4 589d-590a; CH 7 592b-593a; BK XII, CH 1 [1069^{a}30-^{b}2] 598b-c / *Soul*, BK I, CH 1 [403^{a}25-^{b}19] 632b-d

16 PTOLEMY: *Almagest*, BK I, 5a-6a

19 AQUINAS: *Summa Theologica*, PART I, Q 85, A 1, REP 2 451c-453c

23 HOBBES: *Leviathan*, PART I, 72a-d

30 BACON: *Advancement of Learning*, 33b-34b; 42c-43d / *Novum Organum*, BK II, APH 1 137a; APH 9 140b-c

42 KANT: *Pure Reason*, 17d-19a / *Fund. Prin. Metaphysic of Morals*, 253a-d / *Practical Reason*, 351b-352c / *Judgement*, 561c-562a,c; 578a-b

51 TOLSTOY: *War and Peace*, EPILOGUE II, 693d-694d

53 JAMES: *Psychology*, 862a-866a; 884b-886a esp 886a

1b. *The relation of the philosophy of nature to mathematics: mathematical method and mathematical principles in natural philosophy*

7 PLATO: *Republic*, BK VII, 391b-398c / *Timaeus*, 449b-450b; 453b-454a; 458a-460b

8 ARISTOTLE: *Physics*, BK II, CH 2 270a-271a; CH 9 [200^{a}15-29] 277c-d / *Heavens*, BK III, CH 1 [299^{a}1-300^{a}19] 390b-391c / *Metaphysics*, BK I, CH 9 [992^{a}29-^{b}9] 510c-d; BK II, CH 3 513c-d; BK VI, CH 1 547b-d; 548c; BK XI, CH 3 [1061^{a}29]-CH 4 [1061^{b}33] 589c-590a; CH 7 592b-593a; BK XII, CH 8 [1073^{b}1-17] 603d-604a; BK XIII, CH 3 609a-610a / *Soul*, BK I, CH 1 [403^{b}10-19] 632d

9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [639^{b}6-12] 161c-d

11 NICOMACHUS: *Arithmetic*, BK I, 812b-d; 813d-814a

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 1, REP 2 3b-4a; Q 7, A 3, ANS 32c-33c

23 HOBBES: *Leviathan*, PART I, 72a-d; PART IV, 268c-d

28 GALILEO: *Two New Sciences*, FIRST DAY, 133b; THIRD DAY, 236d-237a; FOURTH DAY, 252a-b

31 DESCARTES: *Rules*, IV, 7a-c; XIV, 31a-d / *Objections and Replies*, 169c-170a

34 NEWTON: *Principles*, 1a-2a; BK III, 269a

42 KANT: *Pure Reason*, 5a-13d; 17d-19a; 211c-218d

51 TOLSTOY: *War and Peace*, EPILOGUE II, 695b-c

53 JAMES: *Psychology*, 882a-883a

2. *Experimental physics and the empirical natural sciences: the relation of experimental and philosophical physics*

7 PLATO: *Republic*, BK VII, 391b-398c

8 ARISTOTLE: *Heavens*, BK II, CH 13 [293^{a}15-31] 384d; BK III, CH 7 [306^{a}3-18] 397b-c / *Generation and Corruption*, BK I, CH 2 [316^{a}5-14] 411c-d

9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 161a-165d esp [639^{b}32-640^{a}10] 162a-b

28 GILBERT: *Loadstone*, PREF, 1a-b; BK II, 27b-c

28 GALILEO: *Two New Sciences*, THIRD DAY, 202d-203a; 214d

30 BACON: *Advancement of Learning*, 16a-b; 30d-31a; 33b-34b; 42a-43d; 46c-47c / *Novum Organum*, PREF 105a-106d; BK I, APH 1-3 108a; APH 51 111c; APH 54 111c-d; APH 63-64 113d-114b; APH 66 114d-115c; APH 80 120a-b; APH 95 126b-c; APH 107 128c; APH 109 128d-129c; BK II, APH 1-10 137a-140d esp APH 1 137a, APH 9 140b-c

31 DESCARTES: *Discourse*, PART VI, 61d-62c

34 NEWTON: *Principles*, 1a-2a; BK III, 269a; RULE III-IV 270b-271b; GENERAL SCHOL, 371b-372a / *Optics*, BK III, 542a-543b

35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 24-29 320c-323a esp SECT 26 321b-c; CH VI, SECT 13 335c-d; CH XII, SECT 9-13 360d-362d passim, esp SECT 10 361b-c

35 BERKELEY: *Human Knowledge*, SECT 59 424b

35 HUME: *Human Understanding*, SECT I, DIV 7 23 27 459a-460d esp DIV 6 460b-c; SECT II, DIV 131-132 508d-509d

39 SMITH: *Wealth of Nations*, BK V, 336b-c

41 GIBBON: *Decline and Fall*, 299a

42 KANT: *Pure Reason*, 5a-13d esp 5c-6c, 17d-19a / *Fund. Prin. Metaphysic of Morals*, 253a-d / *Intro. Metaphysic of Morals*, 387a-b / *Judgement*, 561c-562a,c; 578a-b

45 LAVOISIER: *Elements of Chemistry*, PREF, 1c-2d

49 DARWIN: *Origin of Species*, 239c

50 MARX: *Capital*, 6c

53 JAMES: *Psychology*, xiiib-xiv; 883b

54 FREUD: *Narcissism*, 400d-401a / *General Introduction*, 545c-d / *Inhibitions, Symptoms, and Anxiety*, 722a-b / *New Introductory Lectures*, 873d-875a esp 874d-875a

2a. *The derivation of definitions, distinctions, and principles from the philosophy of nature: the metaphysics of the scientist*

8 ARISTOTLE: *Heavens*, BK III, CH 7 [306^{a}3-18] 397b-c / *Sense and the Sensible*, CH 1 [436^{a}16-^{b}17] 673b-c / *Youth, Life, and Breathing*, CH 27 [480^{b}21-30] 726d

10 HIPPOCRATES: *Ancient Medicine*, par 1-2 1a-d

28 GILBERT: *Loadstone*, BK V, 104b-105d; BK VI, 109a-b

28 GALILEO *Two New Sciences* FIRST DAY 135b 136b THIRD DAY 197a b 200a c
33 PASCAL *Vacuum* 366a 368b
34 NEWTON *Principles* BK III RULE I III 270a 271a GENERAL SCHOL 369b 372a / *Optics* BK I 409b BK III 540a 541b 542a
34 HUYGENS *Light* CH I 553b 554a
35 BERKELEY *Human Knowledge* SECT I 2 432d-433a
42 KANT *Intro Metaphysic of Morals* 387a b
45 LAVOISIER *Elements of Chemistry* PART I 36b 41b c
45 FOURIER *Theory of Heat* 172a
45 FARADAY *Researches in Electricity* 582b 584a 595a 670a 673d 824a b 837b-c 839b c
53 JAMES *Psychology* viib viiia 69b 70a 84a 119b esp 89b 90a 95a 882a 886a 889a 890a
54 FREUD *Narcissism* 400c-401d / *Instincts* 412a b

2b The treatment of causes in philosophical and empirical physics description and explanation theory and prediction

7 PLATO *Phaedo* 240d 246c / *Republic* BK VI VII 383d 398 / *Timaeus* 455a b
8 ARISTOTLE *Posterior Analytics* 97a 137a c passim esp BK I CH 13 107c 108c BK II CH 1 2 122b d 123c CH 9 128a b CH 11 128d 129d CH 16-18 134b 136a / *Physics* BK CH 3 [94^b16-23] 271a b C I 7-9 275b 278a c K IV CH 4 [211^a6-11] 290a / *Metaphysics* BK I CH I [98 $^a24$-982 1] 499 500b CH 2 [98 8-30] 500 BK III CH 2 [996 18 $^b26$] 514d 515b BK VI CH I [1025^b1-18] 547b d K VII CH 7 [1041 0-$^b11$] 565b d BK VII CH 4 [1044 33 $^b20$] 569 b BK XI CH 7 [1063^b36-1064 9] 592b
9 ARISTOTLE *Parts of Animals* K I CH I [639^b10-642^b4] 161d 165d esp [642 30] 165 c / *Gait of Animals* CH I 243a b / *Generation of Animals* K I H I [715 1- 8] 255a b BK CH I [765 35-$^b5$] 306c BK V CH I [778^b7 10] 320d
10 GALEN *Natural Faculties* K I CH 4 169a
12 LUCRETIUS *Nature of Things* BK V [5 9-533] 67d 68a BK VI [703-71] 89 d
16 COPERNICUS *Revolutions of the Heavenly Spheres* 505a 506a
16 KEPLER *Epitome* BK V 959 960a
19 AQUINAS *Summa Theologica* PART I Q 32 A I R P 2 175d 178a Q 57 A 3 ANS 297b-298a Q 86 A 4 ANS 463d-464d
23 HOBBES *Leviathan* PART I 60 b PART IV 267a b
28 GILBERT *Loadstone* BK I 6a 7a BK II 27b
28 GALILEO *Two New Sciences* THIRD DAY 202d 203a FOURTH DAY 252a b
28 HARVEY *Circulation of the Blood* 319c / *On Animal Generation* 335c 336c 393b 425a
30 BACON *Advancement of Learning* 42 -c 43a d 45a-46 46c-47 / *Novum Organum* BK I APH 48 110d 111a APH 99 127b c BK II APH 2 137b c / *New Atlantis* 210d
31 DESCARTES *Rules* IX 15b d / *Discourse* PART I 61b 62c 66a b / *Meditations* IV 90a b / *Objections and Replies* AXIO I I 131d 215a b
31 SPINOZA *Ethics* PART I APPENDIX 369b 372d
34 NEWTON *Principles* 1a 2a DEF VIII 7b 8a BK III RULE I II 270a GENERAL SCHOL, 371b-372a / *Optics* K III 542a 543a b
34 HUYGENS *Light* CH I 553b 554a
35 LOCKE *Human Understanding* BK IV CH III SECT 28 29 322a 323a
35 BERKELEY *Human Knowledge* SECT 32 418d-419a SECT 50-53 422 423a passim SECT 60-66 424b-426a passim SECT 101 109 432c-434b passim
35 HUME *Human Understanding* SECT I DIV 9 454c 455a SECT IV DIV 26 460b c SECT VII DIV 57 475d-476b [fn 2] DIV 60 477a SECT VII DIV 67 480c-481a
42 KANT *Pure Reason* 46d-47c / *Practical Reason* 311d 314d / *Judgement* 557c 558b 564a c 581 582c
45 LAVOISIER *Elements of Chemistry* PART I 9d 10b
45 FOURIER *Theory of Heat* 169a 183a b
49 DARWIN *Origin of Species* 239c 240d
51 TOLSTOY *War and Peace* BK IX 344 b BK XI 470a c BK XIII 563 b EPILOGUE I 650b c EPILOGUE 694d 696d
53 JAMES *Psychology* 69b 70a 89b 90a 742 b 745b 882a 884b passim esp 882b 883a 884b 885a 886a
54 FREUD *General Introduction* 454b- 484a

3 The role of mathematics in the natural sciences observation and measurement in relation to mathematical formulation

8 ARISTOTLE *Posterior Analytics* BK I CH 9 [76 3-25] 104b-d CH 13 [78^b31-79 6] 108b / *Physics* K II CH 2 [194^a7-11] 270b c BK VII CH 5 333 d / *Metaphysics* BK XIII CH 3 [10,8 5 17] 609b c
9 ARISTOTLE *Gait of Animals* CH 9 247a 248a
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23 HOBBES *Leviathan* PART I 72a d 73b PART IV 268c d
28 GALILEO *Two New Sciences* FIRST DAY 131b 132 133b FOURTH DAY 245b-d 252 b

4d E perimental me surement the application of mathematical formulae

28 GILBERT *Loadstone* BK IV 85c 89c BK V 92 93b
28 G LILEO *Two New Sciences* FIRST DAY 136d 137c esp 137b c 148d 149c 164a 166c esp 165 166c THIRD DAY 207d 208c
28 HARVEY *Motion of the Heart* 286c 288c
34 NEWTON *Pri ciples* LAWS OF MOTION SCHOL, 20a 22a BK II G N RAL SCHOL 211b 219a PROP 4 CHOL 239a 246b
45 LAVOISIER *Elem nts of Chemistry* PART I 14a-c 17a 20b 22d 24a 30a 32d 33b 36a PART III 87d 90a 91a 95a 96b 103b
45 F URI R *Theory of Heat* 175b 184b 185b
45 FARA AY *Res a ch s i Electricity* 277d 279a 316b 318 366d 371d 444a 451a 465d 467a 768d 773d 778b d 793c
53 JAM *Ps h l gy* 56a 66a e p 61b 64a 126a 265a 268b 341a 344b 348a 359a

5 The ut lity of physics the in ention of m ch es the techn ques of engineering the mastery of n ture

14 P UTARCH *Ma cellus* 252a 255a
28 G B RT *Lo dstone* K III 75a b BK IV 85 89c BK V 100 101d
28 GALILEO *Two New Sciences* FIRST DAY 160d 161a SECOND DAY 191b 193b
30 B CON *Adian emert of Learning* 34b / *Notum O ganum* BK I APH 81 120b c APH 124 133c d APH 129 134d 135d BK II APH 39 170b c APH 44-51 175d 194c / *New At lantis* 210d 214d
31 DESCARTES *Discourse* PART VI 60d 67a c esp 61b c
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50 MARX *Capit l* 170a c 180d 188 239 d
50 M RX EN LS *Commu i t M fe to* 421d
54 FREUD *C v lizat on and Its Discontents* 777a 778b 779a

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The relation of physics as a philosophy of nature to mathematics and to metaphysics *see* MATHE IATICS 1a MATTER 4b METAPHYSICS 3b NATURE 4b PHILOSOPHY 2b SCIENCE 1a( )

The relation of mathematics to experimental physics and for the nature of mathematical physics *see* ASTRONOMY 2c MATHEMATICS 5b MECHANICS 3 SCIENCE 5c

Other discussions relevant to the treatment of causes in philosophical and scientific physics *s e* ASTRONOMY 3a–3b CAUSE 5b SCIENCE 4c and for other treatments of problems or concepts fundamental to phys cs *see* CHANCE 1a–1b CHANGE 2–2b 5a–5b 6a–6b 7a 7d ELEMENT 3–3d 5 INFINITY 3d–3e 4a–4b MATTER 1–1b 2a–2b MECHANICS 1a–1c 6a–6e NATURE 3a–3c(3) QUANTITY 5a–5e SPACE 1–2c 3b TIME 1

The lo ic of the experimental method in the study of nature *see* INDUCTION 5 LOGIC 4b MECHANICS 2a REASONING 6c and for the theory of exp rimentation and the use of hypotheses and measurements *see* ASTRONOMY 2a–2b EXPERIENCE 5a–5c HYPOTHESIS 4–4d MATHEMATICS 5a MECHANICS 2b 3a QUANTITY 6–6c SCIENCE 5a–5b 5d–5e

Other considerations of the utility of physics or natural science generally *see* KNO VLEDGE 8a SCIENCE 1b(1)

The various br nches of physics such as astronomy statics dynamics optics acoustics hydrodynamics magnet sm and electricity *see* ASTRONOMY 8a–9f MECHANICS 1b 5a–5f(2) 6 –6e 7a 7b–7c 7d 7e

Discussions rel vant to the distinction between phys cs and b ology o psych logy *s e* ANIMAL 4a CHANGE 6c–6d 9a–9b 10a–10b LIFE AND DEATH 2 MECHANIC 4b–4c MIND 2e and for the treatment of one aspect of psychophysics *see* S NSE 3 (2)

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World* but relevant to the idea and topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collection
II Works by authors not represented in this collection

For the date place and other facts concerning the publication of the works cited consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*

I

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Chapter 68 PLEASURE AND PAIN

INTRODUCTION

PLEASURE and pain writes Locke like other simple ideas cannot be described nor their names defined the way of knowing them is only by experience That pleasure and pain are elementary experiences attributed to animals as well as enjoyed or suffered by men is attested by poets and physiologists alike by economists and theologians by historians and moralists Yet in the tradition of western thought few of the great writers are content to leave the nature or meaning of pleasure and pain to the intuitions of experience alone

Conflicting definitions are proposed Psychologists disagree about the conditions under which the feelings of pleasure and pain occur their causes and consequences their relation to sensation to desire and emotion to thought vol tion and action Moralists dispute whether pleasure is the only good and pain the only evil whether pleasure is only one good among others to be assessed according to its worth in the scale of goods whether pleasure and pain are morally indifferent whether some pleasures are good others bad or all are intrinsically evil

Not only in the theory of good and evil but also in the theories of beauty and truth pleasure and pain are fundamental terms They are affected by all the difficulties which belong to these great themes and also with the difficulties attendant on the ideas of vi tue sin and punishment of duty and happiness into the consideration of which pleasure and pain traditionally enter

The trad tional use of the words pleasure and pain is complicated by more than the variety of definitions which have been given. Other words are frequently substitut d for them sometimes as synonyms and sometimes to expres only one part or aspect of their meaning Locke for example uses pleasure or delight pain or uneasiness and he observes that whether we call it satisfaction delight pleasure happiness etc on the one side or uneasiness trouble pain torment anguish misery etc on the other they are still but different degrees of the same thing Other writers use joy and sorrow or grief as synonyms for pleasure and pain

The words pleasure and pain are closely associated in meaning with pleasant and unpleasant though Freud sometimes uses unpleasure (*unlust*) to signify an opposite of pleasure which is not the same as ordinary pain (*schmerz*) The pleasant is often called agreeable enjoyable or satisfying In the language of Shakespeare the words like and dislike have currency as the equivalents of please and d splease A person who is d s pleased by something says of it that it likes me not

THE PROBLEM OF what pleasure and pain are seems logically to precede the ethical consideration of their relation to good and evil happiness and misery virtue and duty But in the tradition of the great books the psychological questions about pleasure and pain are usually raised in moral or political treatises and sometimes in connection with discu sions of rhetoric What pleasure is how it is caused and the effects it produces are seldom considered apart from hether pleasures should be sought or avoided whether some pleasures should be preferred to others and whether pleasure is the sole criterion of the good Sometime as w th Marcus Aurelius and Epictetus the ethical point—that pleasure and pain are in one sense morally indifferent—is made without any psychological account of the nature nd orig n of these experiences. More frequ ntly as in Plato s *Ph leb us* and Aristotl s *Ethics* or in

writings of Hobbes Spinoza Locke and Mill the psychological discussion is imbedded in an ethical or political context

Even Lucretius and William James do not seem to be complete exceptions James theory that the feeling of pleasure accompanies activity which is unimpeded whereas pain attends arrested activity seems to be a purely psychological observation and one which can be readily divorced from moral considerations on the ground that it makes no difference to the occurrence of pleasure and pain whether the activity in question is ethically good or bad Yet James makes this observation the basis for arguing against those whom he calls the pleasure philosophers —those who make pleasure the only motive or goal of conduct They confuse he thinks the pursuit of pleasure itself with the pleasure which accompanies the successful a hievement of other things which may be the goals of activity

A *pleasant act* he writes and an act *pursuing a pleasure* are in themselves two perfectly distinct conceptions though they coalesce in one concrete phenomenon whenever a pleasure is deliberately pursued Because a plea ure of achievement *can* become a pursued pleasure upon occasion it does not follow that everywhere and always that pleasure must be pursued One might as well suppose that because no steamer can go to sea without incidentally consuming coal and because some steamers may occasionally go to sea to *try* their coal that therefore no steamer *can* go to sea for any other motive than that of coal consumption

Psychological observations of this sort have an obvious relevance to Aristotle s theory of good and bad pleasures as well as to Locke s and Mill s position that pleasure is the only good or the only object of desire They reveal an ethical strain even in the psychologist view of pleasure and pain The same point can be made with regard to James observation that pleasures are generally associated with beneficial pains with detrimental experiences

Lucretius appears to give a purely physiological account of pleasure and pain in terms of the effect upon the sense organs of various atomic configurations Those things wh ch can touch the senses pleasantly are made of smooth and round bodies but those which seem to be bitter and harsh are made up of particles more hooked and for this reason are wont to tear a way into our senses Hot fires and cold frost have particles fanged in different ways to prick the senses But Lucretius is concerned to point out not only the basis of pain in the atomic nature of things but also the natural tendency of all sensible things to avoid pain as the one besetting evil Nature cries aloud for nothing else but that pain may be kept far sundered from the body and that withdrawn from care and fear she may enjoy in mind the sense of pleasure

Without giving any psychological explanation of the pleasures of the mind Lucretius sets them above the pleasures of the body because the latter—as his diatribe against love makes clear—seem to be inevitably followed by bodily torments or even to be admixed with them The first maxim of nature then is not to seek pleasure but to avoid pain and among pleasures to seek only the unmixed or pure the pleasures of knowledge and truth The distinction between different qualities of pleasure (pleasures of the body and of the mind mixed and pure pleasures) which is made by Plato and Mill as well as by Lucretius inevitably tends to have at once both moral and psycholo ical si nifican e

If in the great books there is any purely psychological theory of pleasure and pain divorced from moral considerations it is probably to be found in Freud The pleasure principle according to him automatically re ulates the operation of the mental apparatus Our entire psychical activity he writes is bent upon *procuring pleasure* and *avoidin pain* Though pleasure and pain are for him primary elements of mental life Freud admits the difficulty they present for psychological analys s We should like to know he writes hat are the conditions giving rise to plea ure and pain but that is just where we fall short We may only venture to say that pleasure is *in some way* connected with lessening lowerin or extinguishing the amount of stimulation in the mental apparatus and that pain involves a heightening of the latter Consideration of the most intense pleasure of which man is capable the pleasure in the performance of the sexual act leaves little doubt upon this point

Yet for Freud the pleasure principle is not the only regulator of mental life In addition to the sexual instincts which aim at gratification and pleasure there are the ego instincts which under the influence of necessity their mistress soon learn to replace the pleasure principle by a modification of it The task of avoiding pain becomes for them almost equal in importance to that of gaining pleasure the ego learns that it must inevitably go without immediate satisfaction postpone gratification learn to endure a degree of pain and altogether renounce certain sources of pleasure Thus trained the ego becomes reasonable is no longer controlled by the pleasure principle but follows the reality principle which at bottom also seeks pleasure—although a delayed and diminished pleasure one which is assured by its realization of fact its relation to reality

This recognition of a conflict between pleasure and reality with a consequent attenuation or redirection of the pleasure principle is not amplified by Freud into a moral doctrine It does however bear a striking resemblance to the theories of moralists like Kant who oppose duty to pleasure and also to the teachings of those ho like Aristotle and Aquinas conceive virtue as the foregoing of certain pleasures and the endurance of certain pains th ough a reasonable and habitual moderation of these passions

IF PLEASURE AND pain were simply sensations like sensations of color or sound they would pose a problem for the physiological psychologist no different from the problems which arise in the fields of vision and audition Modern physiological research claims to have discovered differentiated nerve endings for pain which together with the specific sense-organs for pressure heat and cold make up the cutaneous senses But whether there are spec al cells for the reception of pain stimuli or whether cutaneous pain results from the too intense stimulation of the pressure and thermal nerve endings there seems to be no evidence of organs sensitized to pleasure as for example the n rve cells of the retina are sensitized to light The feeling of pleasure it would seem to follow is not a sensation This seems to be confirmed by the traditional observat on that every type of sensation including the sensation of pain can be pleasant

Even if pain unlike pleasure is found to be a specific mode of sensation with a special sense organ of its own all other types of sensation—visual auditory olfactory etc —might still have painfulness or a feeling of unpleasantness as an attribute That such is the case seems to be a matter of traditional observation Locke for example says that delight or uneasiness one or the other of them join themselves to almost all our ideas of sensation and reflection there is scarce any affection of our senses from without which is not able to produce in us pleasure or pain So understood pleasure and pain —or the pleasant and the unpleasant—are not opposite sensations as are hot and cold but contrary attributes with which every sort of sensation *can* be affected All *need* not be Some sensations may be neutral with respect to what psychologists call affective tone or affective quality

The kind of pleasure and pain which is called bodily or sensuous would thus be sensuous because it is an attribute of sensations and bodily because sensations involve bod ly organs But in almost every great discussion of pleasure and pain other types are recognized intellectual delights the pleasures and pains of learning aesthetic pleasure in contemplating beauty with the mind as well as with the senses and the pain of loss the grief accompanying deprivation which is so different from the torment of a painful affliction of the senses The human suffering with which the great poems deal is much more often a torment of the spirit than *of the flesh*

To cover these other types of pleasure and pain we must go beyond sensation to two other terms traditionally connected with the psychological analysis of pleasure and pain One is emotion the other desire the latter to be understood broadly as including both the sensitive and the rational appetites—both the passions and the will Aquinas for example treats joy and sorrow as specific emotions which represent the appetite in a state of satisfact on or frustration So too the will as an appetite can come to rest in the attainm nt of ts object and with fruit on be in a state of joy

As conditions of the appetite

pain (or joy and sorrow) can be either passions and like all other emotions bodily states or th y can be acts of the will and according to Aquinas at least spiritual states But either way pleasure and pain seem to repre ent the satisfaction or frustration of desire rather than objects desired or averted To be pleased by the attainment of an object desired such as food and drink or knowledge is not the same as to desire pleasure itself as for example the pleasant sensations which may be involved in eating or drinking

Aquinas talks about the desire for pleasure and the aversion to pain as well as the pleasure and pain of satisfied and unsatisfied desires Since the same words are almost always used to express both meanings the two senses of pleasure and displeasure may go unnoticed unless by context or by explicit mention the author refers to pleasure as an object of desire or identifies it with the satisfaction of any desire whether for pleasure or for some other object As a passage already quoted from James indicates and as we shall presently see more fully the distinction betwe n these two senses of pleasure his a critical bearing on the dispute between those who think that pleasure is the only good and those who think that pleasure is one good among others

The generally recognized difference between two kinds of pain—the pain of sense and the pain of loss or deprivation—parallels the distinction which most writers acknowledge between sensuous pleasure and the pleasure of possession or satisfaction Plato s example of the pleasure involved in the relief of itching by scratching seems to catch both meanings and in addition to show that bodily pleasures may be either sensual *objects* or sensual *satisfactions* In contrast the pleasures of the mind are satisfactions of intellectual desire as in the contemplation of beauty or the knowledge of truth

Aristotle deals with pleasure and pain as *objects* when he defines temperance as a moderate pursuit of bodily pleasures and courage as controlling the fear of pain and its avoidance. But he also conceives pleasure as that which completes any activity whether of the senses and the body or of thought and the mind Without activity he writes pleasure does not arise and every activity is completed by the attendant pleasure This meaning of pleasure seems to be analogous to if not identical with pleasure as satisfaction at least insofar as the satisfaction of a desire is that which completes the activity springing therefrom There can be as many different kinds of pleasure as there are kinds of activity the quality of the pleasure is determined by the character of the activity it accompanies

Though Mill refers to pleasure and freedom from pain as the only things desirable as ends he admits many other objects of desire in the attainment of which men find pleasure or satisfaction It is wrong to suppose that human beings he writes are capable of no pleasures except those of which swine are capable Precisely because human beings have faculties more elevated than the animal appetites they have sources of pleasure or gratification not open to swine Here as before two meanings of pleasure seem to be involved In pointing out that money in many cases is desired in and for itself Mill is naming an object of de ire which like health knowledge power or fame is not pleasure yet which through being desired is a source of pleasure (*i e* satisfaction) when achieved Like other objects of desire sensual or bodily pleasures may also be sources of satisfaction

These two meanings of pleasure are most in need of clear distinction when the relation of pleasure to happiness is being discussed If happiness as Aristotle and Mill seem to say consists in having all desires satisfied then the content of the happy life can be described either in terms of the goods which the happy man possesses—the objects of desires fulfilled—or in terms of the pleasures which accompany the goods possessed that is the pleasures which are satisfactions of desire If pleasure in the other meaning especially sensual or bodily pleasure is only one object of normal desire then lack or deficiency of pleasure may like loss of health or fortune impair a man s happiness But the pursuit of pleasure in this sense cannot be identified with the pursuit of happiness A life including every sort of bodily pleasure and free from every sort of bodily pain if it lacked other things men normally desire would be marred by many dissatisfactions inconsistent with happiness.

Talking to Don Quixote of the island he would like to govern Sancho Panza says The first thing I would do in my government I would have nobody to control me I would be absolute Now he that s absolute can do what he likes he that can do what he likes can take his pleasure he that can take his pleasure can be content and he that can be content has no more to desire Here it would seem San cho conceives happiness as the sum of pleasures in the sense of satisfactions—all desires come to rest through the possession of their objects

Dr Johnson seems to make the opposite point about pleasure and happiness Boswell asks him whether abstention from wine would be a great deduction from life It is a dimi nution of pleasure to be sure Johnson replies but I do not say a diminution of happiness But Boswell asks if we could have pleasure always should we not be happy? Johnson ex plains his negative answer by saying that when we talk of pleasure we mean sensual pleasure When a man says he had pleasure with a wom an he does not mean conversation but some thing of a different nature Philosophers tell you that pleasure is contrary to happiness

This last observation does not seem to de scribe the position taken by those philosophers who make happiness the greatest good or ulti mate end of human striving Both Aristotle and Mill distinguish the life of pleasure the bestial or swinish life from one which employs the hi her faculties peculiar to man In this sense perhaps the life of pleasure can be regarded as contrary or opposed to what Johnson along with Aristotle and Mill calls the rational life But pleasure itself far from being inim cal to happiness either represents the state of satis faction which is identical with happiness or one of the *things a man desires and hence a* constituent of the happy life

Hobbes and Locke seem to go further in the direction of identify ng pleasu e with happiness or the good Pleasure writes Hobbes is the appearance or sense of Good and Displeas ure the appearance or sense of Ev l Simi larly Locke says that things are good or evil only in reference to pleasure or pain That we call *good* which s apt to cause or ncrease pleas ure or to diminish pain in us And on the contrary we name that *ev l* which is apt to pro duce or increase any pain or diminish any pleasure in us As for happiness it is accord ing to Locke the utmost pleasure we are ca pable of and misery the utmost pain and the lowest degree of what can be called happiness is so much ease from all pain and so much present pleasure as without which anyone can not be content

In which sense of the term is Locke identi fying pleasure with happiness? Not sensual pleasure nor even pleasure as an object of de sire it would seem for he says Let one man place his satisfaction in sensual pleasure an other in the delight of knowledge though each of them cannot but confess there is great pleas ure in what the other pursues yet neither of them making the other s delight a part of *his* happiness their desires are not moved but each is satisfied without what the other en joys Yet his understanding of happiness as consisting in the pleasures or satisfactions ac companying the possession of things desired leads him to criticize [t] the philosophers of old who did in vain inquire whether the *summum bonum consisted in riches or bodily delights* or virtue or contemplation they might have as reasonably disputed whether the best relish were to be found in apples plums or nuts and have divided themselves into sects upon it For as pleasant tastes depend not on the things themselves but on their agreeableness to this or that particular palate wherein there is great variety so the greatest happiness consists in the having those things which produce the greatest pleasure These to different men are very different things

The difference between Locke s position and that of Mill seems therefore not to lie in a different conception of the relation of plea ure *—as object or as satisfaction of des re—to hap* piness but rather in Locke s conception of de grees of happiness as being determined only by larger and smaller quantities of pleasure where as Mill insists *upon diverse qualities of pleasure* and upon the possibility of ordering pleasures as higher and lower In consequence Mill can say what Locke would seem unable to app ove namely that it s better to be a human being d ssatisfied than a pig satisfied b tt r to be Socrates dissatisfied than a fool sat sfied

Locke s denial that happiness is the same

for all men explicitly takes issue with Aristotle s contrary view It also involves an issue about pleasure For Locke as apparently for Hobbes and Mill the good and the pleasant are inseparable Nothing which satisfies a desire can be evil Whether as in Locke s view one satisfaction is as good as another and the only thing which matters is the amount or number of satisfactions or whether as in Mill s view one pleasure may be better than another in no case is a pleasure bad so long as some one desires it or desires the thing which produces satisfaction when possessed

But for Aristotle desires themselves can be good or bad and consequently there can be good and bad pleasures as well as pleasures which vary in quality and in degree of goodness Since activities differ in respect of goodness and badness and some are worthy to be chosen others to be avoided and others neutral so too Aristotle writes are the pleasures for to each activity there is a proper pleasure The pleasure proper to a worthy activity is good and that proper to an unworthy activity bad just as the appetites for noble objects are laudable those for base objects culpable

Pleasure and pain in Aristotle s judgment are measured by virtue not what is good and evil by pleasure and pain Pleasure and pain are elements common to the good life and the bad but only the pleasures which the good man enjoys and the pains he willingly suffers can be called good That is why in educating the young we steer them by the rudders of pleasure and pain for to enjoy the things we ought and to hate the things we ought has the greatest bearing on virtue or character Virtue is possessed only by those who habitually take pleasure in the right things

As INDICATED IN THE chapters on HAPPINESS and DUTY the moralists who make duty rather than virtue the spring of right conduct and who make the goodness of anything depend upon its rightness according to the moral law see little difference among the various theories of pleasure and happiness as the ultimate good and the standard of conduct

The most eloquent tribute which Kant can pay to the idea of duty is that it embraces nothing charming or insinuating Reason he says will never let itself be brought around to the view that there is any intrinsic worth in the real existence of a man who merely lives for enjoyment even when in so doing he serves others Admitting that the greatest a re gate of the pleasures of life taking duration as well as number into account would appear to merit the name of a true nay even of the highest good Kant adds that reason sets its face against this too The line of duty is always set against the seductions of pleasure or any calculations of utility whether in terms of the means to achieving happiness or the ways of augmenting life s satisfactions

According to Stoics like Marcus Aurelius pleasure is neither good nor useful nor is pain an evil for when we are pained by any external thing we should remember that it is not this thing which disturbs us but our own judgment about it Pleasure and pain are morally indifferent for like death and life honor and dishonor pain and pleasure are things which happen equally to good men a d bad and therefore make us neither better nor worse and are neither good nor evil

From the same observation that pleasure is enjoyed by good and bad men Aristotle and Plato seem to draw the conclusion not that it is morally indifferent but as we have seen that there are good and bad pleasures Plato uses pleasure and wisdom to typify fundamentally different kinds of good Wisdom is always true and good but like opinion which can be either true or false there are true and false pleasures, good and evil pleasures Furthermore wisdom or knowledge represents the kind of good which is definite or intrinsically measured whereas pleasure like wealth is an indefinite good requiring something external to itself something like wisdom to measure it and lim t its quantity

If wisdom be allowed to choose among pleasures Socrates suggests in the *Philebus* it will choose those associated with itself in the activities of the mind not the bodily pleasures which are always mixed with pain So far as pleasure belongs to the realm of change or becoming it is again like opinion inferior to knowledge and wisdom which draw their good n ss from the realm of immutable being Ye Plato does not seem to think that knowledge

and wisdom are the only goods The argument against those who think so seems to be as con clusive as against those who think that pleasure is the only good

Each of the simple lives—the life of pleasure or the life of wisdom—is deficient Only the mixed life the life which combines both pleas ure and wisdom is the complete life Like the happy life in Aristotle s view it includes every kind of good and the difficult problem for Plato as for Aristotle seems to be finding the principle which determines the goodness of the mixture or the right order and proportion in which the variety of goods should be combined

THE MORAL ISSUES which have been raised here with respect to pleasure and pain are more broadly considered in the chapters on GOOD AND EVIL and on VIRTUE TEMPERANCE and SIN as well as in the chapters on HAPPINESS and DUTY Other issues are reserved entirely for discussion elsewhere such as the role of pleasure in the perception of beauty and in judgments of taste (the chapter on BEAUTY) or the role of pain in relation to the govern ment of men (the chapter on PUNISHMENT)

Two special problems which involve pleasure and pain remain to be br efly mentioned The first concerns the contrast between asceticism and self indulgence or even profl gacy

In the tradition of western thought and cul ture and in the ancient as well as in the mod ern world those who worship pleasure though perhaps only as a minor deity to be celebrated in bacchic revels stand opposed to those who turn away from pleasure as from the world the flesh and the devil even mortifying the flesh and sanctifying themselves with pain In their less ext eme forms these contrasting atti tudes generate the traditional issue concerning the place of worldly recreations in man s life and in the state Is the pleasure of play a neces sary and proper relief f om the pain of work or is it always an indulgence which provides occa sions for sin? Are the enjoyment of the theatre of music and poetry the gaiety of public festi vals and the d versions of games or sports things to be promoted or prohibited by the state?

Man s avidity for amusements and di ersions of all sorts leads Pascal to say Ho v hollow and full of ribaldry is the heart of man! The fact that men spend their time in following a ball or a hare and that it is the pleasure even of kings indicates to him how deep is the misery from which men try to escape through play and pleasure If man were happy Pascal sug gests he would be the more so the less he was diverted But so wretched is man that he would weary even without any cause of weari ness from the peculiar state of his disposition and so frivolous is he that though full of a thousand reasons for weariness the least thing such as playing billiards or hitting a ball is suf ficient to amuse him Men need such diver sions in order to prevent them from thinking of themselves

Men indulge in pastimes for another reason according to Aristotle They need relaxation because they cannot work continuously and amusement is a sort of relaxation But hap piness does not lie in amusement It would in deed be strange he says if the end were amusement and one were to take trouble and suffer hardship all one s life in order to amuse one s self It is true that pleasant amuse ments resemble happiness in having the na ture of an end because we engage in playful activity not for the sake of other things whereas we do serious work for some end be yond itself But in Aristotle s opinion a vir tuous life requires exertion and since the hap py life is thought to be virtuous it follows that serious things are better than laughable things and those connected with amusement

These reflections on work and play and the pains and pleasures they involve lead us to the second of the two problems mentioned above That concerns pleasure and pain in the life of learning Here there seems to be no funda mental issue for the tradition speaks with an almost unanimous voice of the pleasure all men find in knowing and the pain none can avoid in the process of seeking the truth The prob-lem is rather a practical and personal one which the great books put to their readers to solve in the r individual lives Their invitation to learn ing should not be accepted nor their promise of pleasure relied upon by those unw ll ng to take the pains wh ch ho v ve g t initially gr dually diminish as the mind in the very p c of learning learns how to learn

OUTLINE OF TOPICS

1 The nature of pleasure and pain

2 The causes of pleasure and pain

3 The effects or concomitants of pleasure and pain

4 The kinds of pleasure and pain different qualities of pleasure

4a The pleasant and unpleasant in the sphere of emotion joy and sorrow delight and grief

4b Sensuous pleasure the affective quality of sensations

4c Intellectual pleasure the pleasures of reflection and contemplation

(1) Pleasure in the beauty of nature or art disinterested pleasure

(2) The pleasure and pain of learning and knowledge

4d The pleasures of play and diversion

4e The kinds of pain the pain of sense and the pain of loss or deprivation

5 The quantity of pleasure the weighing of pleasures the limits of pleasure

6 Pleasure and the good

6a Pleasure as the only good or as the measure of goodness in all other things

6b Pleasure as one good among many pleasure as one object of desire

6c Good and bad pleasures higher and lower pleasures

6d Pleasure as the accompaniment of goods possessed the satisfaction of desire

6e Pleasure as intrinsically evil or morally indifferent

7 Pleasure and happiness their distinction and relation

7a Pleasure and pain in relation to love and friendship

7b The life of pleasure contrasted with other modes of life the ascetic life

8 The discipline of pleasure

8a Pleasure and pain in relation to virtue the restraints of temperance and the endurance of courage

8b The conflict between pleasure and duty or the obligations of justice the pleasure principle and the reality principle

8c Perversions or degradations in the sphere of pleasure and pain sadism and masochism

9 The regulation of pleasures by law

10 The social utility of pleasure and pain

10a The employment of pleasure and pain by parent or teacher in moral and mental training

10b The use of pleasure and pain by orator or statesman in persuasion and government

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in **4** HOMER *Iliad* BK II [265 283] **12d** the number **4** is the number of the volume in the set the number **12d** indicates that the passage is in section d of page 12

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lower halves of the page For example in **53** JAMES *Psychology* **116a 119b** the passage begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the page For example in **7** PLATO *Symposium* **163b 164c** the passage begins in the lower half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One or more of the main divisions of a work (such as PART BK CH SECT) are sometimes included in the reference line numbers in brackets are given in certain cases *e g* *Iliad* BK I [265 283] **12d**

BIBLE REFERENCES The references are to book chapter and verse When the King James and Douay versions differ in title of books or in the numbering of chapters or verses the King James version is cited first and the Douay indicated by a *(D)* follows *e g* OLD TESTAMENT *Nehemiah* 7 45—*(D) II Esdras* 7 46

SYMBOLS The abbreviation esp calls the reader s attention to one or more especially relevant parts of a whole reference passim signifies that the topic is discussed intermittently rather than continuously in the work or passage cited

For additional information concerning the style of the references see the Explanation of Reference Style for general guidance in the use of *The Great Ideas* consult the Preface

1 The nature of pleasure and pain

7 PLATO *Phaedo* **221** / *Republic* BK IX **421a-424a** / *Timaeus* **463d 464b** / *Philebus* **609a-639c** esp **619d 633** / *Laws* BK IX **748a**

8 ARISTOTLE *Prior Analytics* BK II CH 36 [48b 8-13] **67b** / *Topics* BK V CH [127 39] **169b** BK VI CH 6 [145 32-b16] **199a b** CH 8 [146b13-19] **200** / *Metaphysics* BK X CH 7 [1072b13-19] **602d 603a**

9 ARISTOTLE *History of Animals* BK VI CH I [589 4-9] **115b** / *Ethics* BK I CH 8 [1099a7 3] **344c d** BK VI CH 5 [1148 15-18] **399a** CH 11-14 **403c-406c** BK X CH 1-5 **426a 430d** esp CH 4 **428b-429c** / *Rhetoric* BK I CH 6 [1362b5-9] **603b** CH 11 [1369b33-1370 3] **613a b** [1370a 27 8] **613**

12 AURELIUS *Meditations* BK V SECT 33 **282** SECT 64 **284a b** BK VIII SECT 28 **287c** SECT 40-42 **288 289a** SECT 47 **289b**

17 PLOTINUS *Fourth Ennead* TR V CH 18 19 **167a d**

18 AUGUSTINE *Confessions* BK VI par 8 **54-55** BK X par 2 **76 d** / *City of God* BK XIV CH 5 **389c 390a** BK XIX CH 1 **507a 509a** passim

19 AQUINAS *Summa Theologica* PART I Q 48 AA 5-6 **263 264d** PART II Q A 6 **619d 620d** Q 3 **752b 759** Q 35 **772b-780**

23 HOBBES *Leviathan* PART I **62b c**

25 MONTAIGNE *Essays* **531 b**

31 SPINOZA *Ethics* PART III PROP 11 2 **399d 400** THE AFFECT DEF 3 **416d-417a**

35 LOCKE *Human Understanding* BK II CH VII SECT 1-6 **131 132d** esp SECT 2 **131c d** CH VI SECT 13 **135b** SECT 16 **135c d** SECT 18 **136 b c** XX SECT 2 **176b c** CH XXI SECT 55 56 **192 193b**

42 KANT *Practical Reason* **293c d** [fn 3] / *Intro Metaphysic of Morals* **385a 386b** esp **385c d** / *Judgement* **470 471b**

43 MILL *Utilitarianism* **463 d**

48 MELVILLE *Moby Dick* **39b 40a**

53 JAMES *Psychology* **829b 830a 860a b**

54 FREUD *Narcissism* **403d-404a** / *Instincts* **413d** / *General Introduction* **592d** / *Beyond the Pleasure Principle* **639b 640a 648d 649c 663a** / *Ego and Id* **701 b** / *Civilization and Its Discontents* **772d 773a**

2 The causes of pleasure and pain

7 PLATO *Republic* BK IX **422c 425b** / *Timaeus* **463d-464b** / *Philebus* **619d 633a**

8 ARISTOTLE *Topics* BK VI CH 6 [145 36-b6] **199a b** / *Physics* BK V CH 3 [246 0-247 9] **330a b** / *Metaphysics* BK V CH 5 [5 27 3] **535d** BK X CH 7 [7 3 9] **602c 603** / *Soul* BK CH 2 [4 6 7 8] **658 d** / *Sense*

(2 *The causes of pleasu e and pa n*)

and the Sensible CH 4 [442 12 17] 679d CH 5 [443^{b}17 44> 3] 681c 682d

9 ARISTOTLE *History of Animals* BK VIII CH I [89 4–9] 115b / *Ethics* BK I CH 8 [1099^{a}7 30] 344c d BK III CH II 365a d passim BK VII CH 4 398a 399a passim esp [1147^{b}23–30] 398a b CH 5 [1148^{b}15 18] 399a CH 12 [115 ^{b}34 1153 18] 404a b BK IX CH 7 [1168 9 18] 421c K X CH 4 [1174^{b}15 11/5] 429a b / *Rheto i* K I C I 10 [1369^{b}15]–CH II [137 3] 612d 615c BK II CH I [1378 20]–CH II [1388^{b}30] 623b 636a pa sim / *Poetics* CH 24 [1460 12 19] 696b

12 LUCRETIUS *Nature of Things* BK II [398 477] 20a 21a BK III [231 257] 33a b BK V [324–331] 48c [6 5–672] 52b 53a [1 37 1072] 57d 58a

12 AURELIUS *Meditat ons* K VII SECT 16 280d BK VIII SECT 47 289b c

17 PLOTINUS *Fourth Ennead* TR IV CH 18 19 167a d

18 AUGU TINE *Confessions* BK III par 2 4 13c 14b BK IV par 10 21c d BK VIII par 7 8 54c 55a K X [ar 21–22 76c 77a

19 AQUINAS *Summa Tneologica* PART I Q 18 A 2 REP 2 105c 106b PART I II Q A 6 619d 620d Q 3 A 4 ANS and REP 3 5 625a 626b Q 4 A 2 630b 631a Q 31 A I RE I 752c 753c Q 32 759a 765b Q 34 A 3 ANS and REP I 770c 771c Q 35 A I 772 773b A 3 REP I 3 774a c Q 36 780c 783c Q 38 786d 789d Q 48 A I 822d 823b

20 AQU NAS *Summa Theolog ca* P RT III SI PPL Q / A 3 897d 900d Q 98 A 7 1076d 1077b

23 HO BES *Levi than* PAR I 62b c

31 DESCART S *Medit tions* VI 97b 98a

31 SPINOZA *Ethics* PART I PROP 11–57 399d 415b passim

32 MILTON *Pa adise Lost* K IV [877–945] 171b 173 esp [912–91(] 172a b

33 PASCAL *Eq l b um of Liqu ds* 401a b

35 LOCKE *Hi man U der ta d ng* BK II C I I ECT 4 132a c CH VIII S CT 13 135b ECT 16 135 d S CT 18 136a b CI XX SECT I 3 176b d C I XXI S CT 43 188d SECT 55 56 192c 193b SECT ~I 197b 198a

38 MONTESQUI U *Spir t of La vs* BK XIV 102b d 103

41 GI BON *De line a d Fall* 234c

42 KANT *P ct cal Reason* 93c d [fn 3] 314d 318b / *Pref Met physical Elements of Eth* 375a b / *I t o Metaphy ic of Morals* 385a 386b / *Judgem nt* 470c 471b

48 M LVILLE *M by Di k* 39b-40a

50 MARX *Cap tal* 166c

53 JA S *Psychology* 324a 409b-410a 812a b 829b 830a 860b

54 FREUD *Narcissism* 403d 404b / *Inst ncts* 413d / *Repr ss on* 422a b / *G neral Int duc t n* 592d / *Beyond the Pleasure P n iple* 639a 640d 648d 649c / *Ego and Id* 701b c / *Inh bitions Symptoms and Anxiety* 753b 754a / *Cu li ation and Its Discontents* 772d 773b

3 The effects or concomitants of pleasure and pain

7 PLATO *Phaedo* 220d 221a 233d 234c / *T mae us* 466a b 474b d / *Philebus* 628c d 637b-c / *Laws* BK I 645b c BK VII 715b 716a

8 ARISTOTLE *Topics* BK IV CH 5 [12$_5$^{b}29–34] 175a CH 6 [127^{b}26–32] 177b / *Soul* BK II CH 2 [413^{b}17–24] 643d CH 3 [414 28 ^{b}5] 644c BK II CH 7 [431 8–14] 663c d

9 ARISTOTLE *Ethics* BK II CH 9 [1109^{b}1 13] 355a c BK III CH 12 [119 22 31] 365d 366 BK VII CH 6 [1149^{b}20–1150 8] 400b c BK IX CH 7 [1168 9–18] 421c

12 LUCRETIUS *Nature of Things* BK III [31 40] 30b c

19 AQUINAS *Summa Theologica* PART I II Q 3 A 4 REP I 625a 626b Q 32 A 4 REP 2 761c 762a Q 33 765b 768c Q 35 A 3 REP 3 774a-c QQ 37 38 783c 789d

20 AQUINAS *Summa Theologica* PART III SUPPL Q 86 A 3 REP 3–4 994d 996a c

21 DANTE *D vi e Comedy* PURGATORY X III [16–39] 80a b

23 HOBBES *Leviathan* PART I 77a PART II 163d 164a

24 RABELAIS *Gargantua and Pantagruel* BK I 8c d

31 SPINOZA *Eth cs* PART III PROP 11–57 399d 415b pass m THE AFFECTS 416b 422 c

35 LOCKE *Human Underst nd ng* BK II CH VII SECT 3–5 131d 132c CH XXI SECT 34 186a b SECT 54 192b c SECT 59 193d 194a

35 BERK LEY *Human Knowledge* SECT I 413b

42 KANT *Pract cal Reason* 314d 318b / *Pref Metaphysical Elements of Ethics* 375a b / *In tro Metaphysic of Mor ls* 385a 386b

46 HE L *Philosophy of History* PART I 220b c

49 D R VIN *Descent of Man* 308a 309d

53 JAM S *Psychol gy* 94a b 526b 527a 647a 650b 651b 654a 655a 725b 726a 808b 814b 829b-830a

54 FR UD *Interp etation of Dreams* 377c 38 d esp 378b d 384c 385c / *Nar issism* 401d 404b / *I stincts* 419a 421a / *Repression* 422a 427a c esp 422a d 425b / *General Introduc tion* 592c 593a / *Be o d the Pleasure Pri ci le* 639a 663d esp 639a 640c 648b-650a 651a d 652b d 654a 662 663 / *Ego and Id* 701b 711c 712a / *Inh b tions Sympt ms and Anx iety* 737b 741c esp 737d 741a b 742b 744 753c d / *New Int oductory Lectu es* 843d 8 6a

4 The kinds of ple ure and pain different qualities of pl sure

7 PLATO *Phaedo* 220d 221a / *Go g as* 2 7d 280d esp 280b d / *Republ c* BK VII 409d 410c K IX 421a-425b / *Philebus* 609a-6 0c 619d 633a

(4 The k nds of pleasure and pain d fferent qual ties of pleasu e 4b Sens tous pleasure the affect ve qual ty of sensat ons)

17 PLOT NUS *Fourth Ennead* TR IV CH 19 167b d CH 8 172a 173b
18 AUGUSTINE *Confessions* BK VI par 26 42d 43a
19 AQUINAS *Summa Theologica* PART I Q 91 A 3 REP 3 486b 487d Q 98 A 2 ANS and REP 3 517d 519a PART I II Q 2 A 6 ANS and REP 2 619d 620d
20 AQUINAS *Summa Theolog ca* PART III SUPPL Q 81 A 4 REP 4 966d 967d
22 C IAUCER *W fe of Bath s Prologue* [5583-5774] 256a 259a
23 HOBB S *Letiathan* PART I 62c
27 SHAKES EARE *Anto y and Cl opat a* ACT II SC I [17 245] 320c 321b
30 BACON *Ad ancement of Learn ng* 27c d 73c d
31 DESC RTES *Med tation* VI 97b 98a
35 LOCKE *Human Unde stand g* BK II CH XX SECT 1– 176b c SECT 15 177d CH XX SECT 42 44 188c 189b
38 ROUSS AU *Inequality* 345d 346b
42 KANT *Judgement* 477b 478a
43 MILL *Ut litarian sm* 447b 450b passim
44 BOSW L *Joh son* 409c
47 GO TH *Faust* PART I [383 4205] 93b 103a PART [10 160 175] 247b 248a
48 MELVILLE *Moby D ck* 307b 308b
49 D RW N *O ig n of Species* 95d / *D scent of Man* 301d 302a 569a b 577b
53 JAMES *Psychol gy* 157a 650b 651b 755b 756a 809b 810b [fn 1] 829b
54 FREUD *Or gin and De lopment of Psycho Analysis* 15d 16 / *Sexual Enlightenment f Ch ldren* 119d 120b / *Interp et tion of D ams* 367b c / *Narciss m* 403a c / *Gener l Int o d t on* 574a 576 578c 579b / *Beyond the Ple su e P ciple* 648b c 663a / *Ego a d Id* 701a c / *Inhib tion Symptoms a d A x ety* 737 b / *C il at a d Its Disc ntents* 773a b / *N u Int oduct y Le tur* 847b 849a esp 847c

4c Intellectual plea ure the pleasures of re flection and contemplat on

7 PLATO *Sympos um* 149d 150a 167a d / *Pha do* 220d 221a / *R publ* BK I 295d 296c BK IX 420d-425b / *Phil bus* 620b 621c 631b
8 A IST LE *Met phys s* BK I CH 1 [980 22 8] 499 BK X I CH 7 [1072b13 29] 602d 603a
9 ARISTOTLE *Part of An mals* BK I CH 5 [644b 22-645a26] 168c 169a / *Eth s* BK VII H 12 [1152b33 1153 1] 404a BK X CH 4 [1174b 5 1175b2] 429 b CH 5-8 429d-434a / *Pol t s* BK VI C I 3 [1338 2 b3] 543b-d CH 5 544c 546 / *Rheto* K I CH II [371b4 10] 615a / *Poet cs* H 4 [1448 4 19] 682 d
12 LUCRETIUS *Natu of Things* BK II [1-61] 15a d BK III [1053-1075] 43c d BK V [1-54] 61a d BK VI [1 41] 80a d
12 EPICTETUS *Discou ses* BK III CH 10 185d 187a CH 15 190a 191a CH 23 195a 201a BK IV CH 4 225a 228a
12 AURELIUS *Med tations* BK III SECT 6 261a c SECT 9 261d SECT 12 262b-c BK IV SECT 16 264d BK V SECT 9 270b c BK VI SECT 12 274c BK X SECT 12 298c d
17 PLOTINUS *F rst Ennead* TR IV CH 12 17d / *Sixth Ennead* TR VII CH 30 336b-d
18 AUGUSTINE *Confess ons* BK VI par 26 42d 43a BK IX par 23 25 68a-c
19 AQUINAS *Summa Theologica* PART I Q 5 A 4 REP 1 25d 26c PART I II Q 3 A 4 A S 625a 626b Q 4 AA 1 2 629d 631a Q 27 A 1 REP 3 737b d Q 34 A 3 770c 771c Q 35 A 5 775d 777a Q 38 A 4 788d 789b
20 AQUINAS *Summa Theolog ca* P RT II II Q 180 A 7 614d 616a PA T III SUPPL, Q 90 A 3 1014d 1016a
21 DANTE *Di ine Comedy* PURGATORY XXX XXXI 99b 102b PARADISE X [7 27] 120b c XXXIII [40-66] 156c d
23 HO BES *Letiathan* PART I 62c 63a
25 MONTAIGNE *Essays* 69d 72a
30 BACON *Ad a cement of Learning* 27c d 73c d
31 D CARTES *Rules* I 1d / *Meditations* III, 88d 89a
31 SPINOZA *Ethics* PART III PROP 53 413a PROP 58 59 415c-416b PART V PROP 32 36 460b 461 PROP 42 463b d
32 MILTON *Il Penseroso* 21a 25a
35 LOCK *Human Understand ng* BK II CH XX 176b 178a passim esp S CT 1 2 176b c SECT 15 177d CH XXI SECT 42 44 188c 189b
40 GI BON *De line and F ll* 645c d
42 KANT *Judgement* 534c 539d 551a 552a 586d 587a
43 MILL *Ut l t an sm* 447b-450b p ssim
47 GO THE *Fau t* PART I [1178 1201] 29b [3217 3239] 79a b
48 MELVILLE *Moby D ck* 255
53 JAMES *Psych logy* 755 758a
54 FREUD *Ci lizat on and Its Discontents* 773d 774c

4c(1) Pleasure in the beauty of nature or art d sintereste l pleasure

4 HOMER *Odyssey* BK VIII 222a 228a c pa sim
7 PLATO *Go gias* 266d 267a / *Philebus* 6 0d 631b / *Laws* BK 653a 656c BK VI 720 c
9 ARISTOTLE *Parts f Animals* BK I CH 5 [645 4 26] 168d 169a / *Ethics* K III CH 10 [1118 1 9] 364 BK VII CH 12 [1153 24 26] 404c / *P lit c* BK VI I CH 3 [1337b27 1338 29] 543a c CH 5 544c 546a / *Poetic* CH 4 [1448 4 23] 682 d CH 14 [1453b12 14] 688b c
12 AUREL US *Med t tions* K III SECT 2 259d 260a
19 AQUINAS *Summ Theolog ca* PA T I Q 5 A 4 REP 1 25d 26c Q 91 A 3 E 3 486b-487d

PART I II Q 27 A I REP 3 737b d Q 32 A 8 ANS 764c 765b
21 DANTE *D une Comedy* PURGATORY II [106-133] 55c d X [22 105] 67c 68c
26 SHAKESP ARE *Merchant of Ven ce* ACT V SC I [66-110] 431b d
29 CERVANTES *Don Quixote* PART I 184b d
31 S NOZA *Ethics* PART V PROP 32 460b
32 MILTON *Samson Ago es* 337a-338a
37 FI LDING *Tom Jo es* 1a 2 49a 50c
42 KANT *Judgement* 470c 471b 471d 473a 476a-483d esp 479a d 485b-486d 495a 496c 509c d 516d 518d 525a 527b 532 d 534 539d
44 BOSWELL *Johnson* 254c d
46 HEGEL *Philosophy of History* INTRO 185c d PART I 220b c PART 267b 268b
47 GOETH *Faust* PART II [92 8-9245] 224a b [9863-9869] 239b [11 288 303] 274b 275a
49 DARWIN *Orig n of Sp cies* 95 d / *De cent of Ma* 301c 302a 568d 571b p ssim 577b d
51 TOLSTOY *W and P ce* BK VI 235a 238a pas im esp 237 238a 257 259a BK VII 278a-c 288c 290b 295c 296a BK X 450a 451c BK XI 497d-498b BK XII 575d 576a
53 JA ES *Psych logy* 157a 886b
54 FREUD *G neral Introd t n* 600d 601b / *Beyo d th Ple sure Pri ciple* 643c / *War and D ath* 756 c / *Ci l ation and Its D scon tents* 774a-c 775b c

4c(2) The ple sure and p n of learning nd knowledge

5 A SCHYLUS *Agamemnon* [16 183] 53d 54a
7 P ATO *Apol gy* 208a / *R publ c* BK I 296a c BK VI 374d 375 K IX 421a-425b / *Th te tus* 515d 517b
8 A ISTO LE *Metaphy c* BK I H I [98 a2 28] 499a
9 ARISTOTLE *Parts of A imal* BK I CH 5 [644b 22-645 37] 168c 169b / *Eth s* K III o [I 17b 8 32] 364b BK VII CH [1153 2 23] 404c K X CH 3 [73b15 8] 427d-428 CH 4 [175 0-17] 429c / *Pol t cs* K V I CH 3 [33 b27 338a29] 543 -c CH 5 [339 27 29] 544d / *Rhetoric* K I CH [1371 30 33] 614d [137 b4 10] 615a / *Poetics* H 4 [1448b4 19] 682c d
12 LUCR TIUS *N tu e of Th g* BK [921-95] 12b c K IV [5] 44 b
12 EPIC E US *D cou* BK II CH 14 153d 155b B C III H 23 201 203b
18 AUGUSTIN *Conf ons* K I par 4 16 4c 5b p r 9-27 5d 7d
19 AQU NAS *Summa The l gic* PART I II Q 4 A I REP 3 629d 630b Q 32 A I REP 759b d A 2 ANS 759d 760d A 3 760d 761c A 8 764c 765b Q 33 A 3 767a d A 4 REP I 767d 768c Q 34 A 3 NS 770c 771c Q 37 A I 783d 784c
21 D TE *D e Comedy* UR ATORY XX [124]-XXI [75] 84c 85d P RADI IV [115] V [12] 111d 112b
22 CH UCER *Prologue* [285 308] 164a b
23 HOBBES *Leviathan* PART I 62c 63a 78d 79b-80a
24 R BELAIS *G rgantua and Pantagruel* BK I 26d 27d 29d 30c
25 MONTAIGNE *Essays* 70d 74a 111b d 244d 246a
26 S AKESPEARE *Love s Labour s Lost* ACT I SC I [70-93] 255a b
28 HARVEY *On A mal Generat n* 331c 332a
29 C RVANTES *Don Quixo e* PART I 146a c
30 BACON *Ad a cement of Learning* 3c-4a 6d 7a 27c d
31 DESCART S *Geometry* BK I 297a b
31 S NOZA *Ethics* PART III PROP 53 413a PROP 58 415c
35 LOCKE *Human Understanding* 87a b BK II C I XXI SECT 44 188d 189b CH XXXIII SECT 5 250
35 HU E *Human U derstand ng* SECT I DIV 6 453b
41 G BBON *Decl e a d Fall* 523c 527a passim esp 524a b
42 KANT *Judgement* 532a d 551d
43 MI L *Utilitar n sm* 451 d
44 BOSWELL *John on* 14b 15a c 130b 135b 136a 309c d
45 LAVOISIER *Elements of Chemistry* REF 1d 2a
47 GOETHE *Faust* PART I [354 736] 11a 19b
51 TOLSTOY *W a and Peace* BK I 47b-48d BK VIII 306b
53 JAME *P ychology* 524b 525a 715b 729b 730a
54 F UD *Civili ation and Its Disconte ts* 779d 780b

4d The ple sures of pl y and dive on

4 HO E R *Il d* BK XXIII [26 -897] 164a 170d / *Odyssey* BK VII 222a 228a c esp [104 55] 223b 224d
5 EURI IDES *Bacchantes* [I 209] 340a 341 [370-431] 343a b / *Cyclops* [139-174] 441 d [495-589] 444d-445d
5 ARISTO H N *A h nians* [241 ,9] 458a b
6 HERO OTU *Hi t ry* BK I 86b
6 THUCYDIDE *Pelop n esian War* K II 396d K II 442 -443a
7 PLATO *Symp s um* 149a 173 / *G g as* 281c d / *Laws* K I 644d 663d esp BK I 647c 648c 650c 652d BK I 653b c 655b 656c 658c 660 662a 663d BK VII 717d 718c BK VIII 731d 735b
9 AR STOTL *Ethics* BK II CH 7 [108 3 26] 353d BK IV CH 8 375a d BK VI H 14 [1154 2 b 9] 405c-406 c BK X CH 6 [1 76b 8 1177a11] 431a c / *Polit cs* K V I 7 [1336 3 b24] 541b d BK V CH 3 [1337b 7 1338 29] 543 1 5 [1339 -CH 6 [34 33] 544c 546b / *Rhet c* K I CH [370a 4 7] 613b c [37 34 137 b7] 614b [37 b 33 137] 615b-c

4 The k nds of pleasure and pain d fferent qual ties of pl asure 4d The pleasures of play and diers on)

12 LUCRETIUS *Nature of Things* BK III [1053–1094] 43c-44a c
14 PLUTA CH *Agesilaus* 489d 490b / *Alexander* 572b d
15 TACITUS *An als* BK XIV 145a d 146b 147a
18 AUGUSTINE *Co fessions* BK I par 15 16 4d 5b BK III par 2 4 13c 14b
19 AQUINAS *Summa Theologica* PART I II Q I A 6 REP I 614a c Q 3 A I REP 3 759b d
22 CHAUCER *P ologue* [747–821] 172a 173a
23 HOB ES *Le athan* PART I 82b-d
24 RA LAIS *Gargantua and Pantagruel* BK I 1a 3 c 7a 8c 14c 15c 25a 26d BK II 97b-99b
25 MONTAIGNE *Essays* 538d 540b
29 CERVANTES *D Quixote* P RT I 186d 187c
30 BACON *Advan eme t of Learni g* 54a b
33 PASCAL *Pensees* 125 183 195b 204b
37 FIELD NG *Tom Jones* 265c 266d
39 S ITH *Wealth of Nat ns* BK V 346c 347d esp 347d
40 GIB ON *Decline and Fall* 90a b 502c 503a 583d 584b
42 KANT *Judgement* 537b-539d
43 MILL *Liberty* 308d 309a
44 BOSWELL *Johns n* 88a 287b-c esp 287d [fn 1] 309a c
46 HEGEL *Philos phy of History* PART II 267b 268b PART III 291d 292c
51 TOLSTOY *Wa and Peace* BK I 10d 11b 16a 18b 37a d BK V 254c 260a BK VII 278a 287a 296a 298d BK VIII 303a 305b esp 305a b BK XI 486c d BK XII 538a 539d
52 DOSTOEVSKY *Brothers Ka ama ov* BK VI I 220 235d BK X 284b d
53 JA IES *Psychology* 716b-717a 727b 729a 732b
54 FR UD *Interpr t tion of D eams* 250d 251a / *Beyond the Pleasure P nciple* 641d 643c 651b-d / *Group Psych l gy* 690b-c / *Civiliza tion and Its D sco tents* 773a b

4e The kinds of pain the pain of sense and the p n of loss or depr ation

4 HOMER *Il ad* BK XVI I [1 126] 130a 131c BK X X [276–368] 139d 140c BK XXII [21–98] 155b 156a [405–515] 159c 160d BK XXIV 171a 179d esp [480–803] 176b 179d
5 AESCHYLUS *Ag memnon* [399 455] 56b-57a
5 SOPHOCLES *Elect a* [86–309] 157a 158b
5 EURI D S *M dea* [1090–1115] 221b c / *Al cest s* [861 1005] 244d 245d / *T j n Women* [572 703] 274d 276a [1156–1333] 279d 281a c / *El ct a* [112 14] 328a d
7 PLATO *Phaed* 250b 251d / *Gorgias* 277d 280d esp 280b-d / *Ph lebus* 619d 633a
9 ARI TOTL *Eth s* BK III CH II [1118b28–1119 5] 365b K VII CH 13 14 404d-406a c pass m BK X CH 3 [1173b7 19] 427d-428a CH 5 [1175b16–23] 430a b
12 LUCRETIUS *Nature of Thi gs* BK III [459–5 5] 36a d [634–669] 38b c [830–1023] 40c 43b BK IV [324 331] 48c [1058–1191] 57d 59d
13 VIRGIL *Aeneid* BK I [194 209] 108a b BK II [735–794] 145a 146b BK IX [473–502] 291b-292b BK X [833–856] 325a b BK XI [29–58] 328b 329b [139–181] 331b-333a BK XII [593 613] 370a
18 AUGUSTINE *City of God* BK XIV CH 15 388d 390a
19 AQUINAS *Summa Theologica* PART I Q 64 A 3 337a-c PART I II Q 35 772b 780c
20 AQUINAS *Summa Theologica* PART III Q 15 A 6 792c 793c Q 18 A 6 REP 3 814d-815d PART III SUPPL, Q 97 A 2 1066d 1067b A 5 1068c 1070a
21 D NTE *Divine Comedy* HELL, III [1 18] 4a b IV [13–45] 5c d V 7a 8b esp [121 123] 8b VI [94 111] 9b c XIV [4 72] 19c 20b PURGATORY VII [1 36] 62c d XXIII [1 75] 88b-89a
22 CHAUCER *Tro lus and Cr ssida* K V 120b-155a esp STANZA 29–106 124a 134a ST Z 174 182 143a 144a / *Tale of Melibeus* par 4 7 401b-402b
23 HOBB S *Leviathan* PART I 62c 79b-d PART III 195b d PART IV 271a
26 SHAKESPEARE *3rd Henry VI* ACT II SC VI [61 84] 83d 84a / *Two Gentlemen of Vero a* ACT III SC I [170–187] 242b / *Romeo and Juliet* 285a 319a c esp ACT III SC III [1 70] 304d 305c ACT V SC III 315d 319a c / *Richa d II* ACT I SC II [58 74] 323b c SC III [139–309] 325a 326d ACT II SC II [1 72] 331a d ACT IV SC I [162 318] 343b 344d / *Much Ado About Nothing* ACT V SC I [1 38] 524c 525a / *Jul us Caesar* ACT III SC I [148 275] 582a 583b
27 SHAKESPEARE *Hamlet* ACT I SC II [68 117] 32b-d / *Othello* ACT I SC III [199–22] 211a b / *K g Lear* ACT V SC III [257 273] 282b / *Antony and Cleopatra* ACT IV SC XV [59–91] 344c 345a ACT V SC I [3 48] 345b-c
29 CERV NTES *Don Quixot* PART II 333b
31 S INOZA *Eth cs* PART III PROP 55 413b-414
32 MILTON *Pa ad e Lost* K I [44 74] 94b 95a BK II [81–92] 113a [521–6 8] 122b-125a BK I [327 343] 203b [386–405] 204b 205a [430–468] 205b 206b / *Samson Agonistes* [606–632] 352b 353b
35 LO K *Hum n Understand ng* BK II CH XX 176b 178a pass m
46 HEGEL *Ph losophy of History* PART I 245b d
51 TOLSTOY *Wa and Peace* BK II 109d 110a c BK X 551d 554a BK X 614a 618b
52 DOSTOEV KY *Brothers Karama ov* BK 160b 163 169c 170b K XII 398a d
53 JAM S *P ychol gy* 554a b
54 F EUD *Inhibitions Symptoms and A xiety* 736c 740c esp 736c 737b 739b-c 743b-744a 752c 754a

(7 *Pleasure and happiness: their distinction and relation.* 7a *Pleasure and pain in relation to love and friendship.*)

18 AUGUSTINE: *Confessions*, BK II, par 16–17 12c-13; BK VI, par 26 42d-43a / *City of God*, BK XIX, CH 5 513d-514b; CH 7–8 515a-516a

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 3, ANS 126a-c; Q 98, A 2, ANS and REP 3 517d-519a; PART I-II, Q 4, A 8, ANS and REP 2 636a-c; Q 31, A 6, REP 3 756d-757c; Q 32, A 1, REP 1 759b-d; A 3, REP 3 760d-761a; AA 5–7 762a-764b; Q 34, A 4, REP 1 771c-772b; Q 36, A 1, ANS and REP 3 780c-781b; A 2, ANS 781c-782b; A 3, ANS 782b-783a; Q 38, A 1, REP 3 786d-787a; A 3 788b-d

20 AQUINAS: *Summa Theologica*, PART II-II, Q 28 527b-530a; Q 30, A 2 534b-535a; PART III SUPPL, Q 94, AA 1–3 1041b-1042c

21 DANTE: *Divine Comedy*, HELL, V 7a-8b; PURGATORY, XVI [91]-XVII [75] 79b-80c

22 CHAUCER: *Troilus and Cressida* 1a-155a esp BK I, STANZA 08 17a 15a-16a; BK I, STANZA 11–125 36a-38a; BK II, STANZA 174–178 77a-b; STANZA 219 83a; BK V, STANZA 29–110 124a-134b; STANZA 174–18 143a-144a / *Knight's Tale* 174a-211a esp [09-1 86] 178a-179b; [574–627] 186a-b

23 HOBBES: *Leviathan*, PART I 85b

25 MONTAIGNE: *Essays*, 398a-399d; 426a-427d; 431c-433c

26 SHAKESPEARE: *Two Gentlemen of Verona*, ACT II, SC I [170–187] 42b / *Romeo and Juliet* 285a-319a c; esp ACT V, SC I-II 315d-319a c / *Midsummer Night's Dream*, ACT I, SC I [8–25] 353d-355a / *Much Ado About Nothing*, ACT I [38] 524 525a / *Julius Caesar*, ACT I, SC I [148–275] 582a-583b

27 SHAKESPEARE: *Hamlet*, ACT I, SC II [68–117] 32b-d; ACT II, SC I [06–5] 51b / *Troilus and Cressida*, ACT I, SC II [8–3] 120b-c; ACT V, SC II [1–19] 126d; SC IV [11–108] 128b-129b / *Othello*, ACT I, SC I [199–2 0] 211a-b / *King Lear*, ACT I, SC VI [109–12] 26 d; ACT V, SC III [257–273] 282b / *Antony and Cleopatra*, ACT I, SC II 314c-315d; ACT V, SC I [3–48] 345b-c / *Timon of Athens* 393a-420d / *Sonnets* 586a-609d passim

29 CERVANTES: *Don Quixote*, PART I, 73d-89

31 SPINOZA: *Ethics*, PART I, PROP 12–13 400b-d; PROP 19–26 402c-404b; PROP 33–46 406c-410; PROP 49 411a-b

32 MILTON: *Paradise Lost*, BK III [5 0–6 7] 243a-245b

35 LOCKE: *Human Understanding*, BK I, CH XX, SECT 4–5 176d-177a

37 FIELDING: *Tom Jones* 126c-127b; 235b-238d

38 ROUSSEAU: *Inequality* 345d-346b

43 MILL: *Utilitarianism* 451b-c

47 GOETHE: *Faust*, PART I [3620–3645] 88b-89a

49 DARWIN: *Descent of Man*, 308a-313a passim esp 308d-309a

51 TOLSTOY: *War and Peace*, BK I 30a-31a; 56b; BK II 69a-c; BK III 135c-137c; 140c-142d; BK IV 167c-d; BK V 203a-d; BK VI 259d-260a; BK VII 276b-277a; BK VIII 319c-d; 323b-324b; 340d-341a c; BK XV 615a-d; 639a-b

52 DOSTOEVSKY: *Brothers Karamazov*, BK I 4a-5b; BK II 32d-36c; BK III 58d-59b; 69d-70c; BK IV 95b-100c; BK VIII 200c-201b; BK X 282b-283c; BK XI 324a-b; EPILOGUE 40 a-408a

53 JAMES: *Psychology*, 391b-392a

54 FREUD: *Instincts*, 418c-421a c esp 420b-c / *Civilization and Its Discontents*, 774d-775a; 782d-783b

7b *The life of pleasure contrasted with other modes of life: the ascetic life*

OLD TESTAMENT: *Numbers*, 6:1–5 / *Ecclesiastes*, 2:1–11; 3:12–2; 5:18–20; 8:14–15—(D) *Ecclesiastes*, 2:1–11; 3:1–2; 5:17–19; 8:14–15 / *Isaiah*, 5:11–12; 22:12–13; 28:1–7-8—(D) *Isaias*, 5:11–12; 22:1–13; 28:1–7-8

APOCRYPHA: *Wisdom of Solomon*, 2 esp 2:1–9—(D) OT, *Book of Wisdom*, 2 esp 2:1–9 / *Ecclesiasticus*, 18:30–3; 19:1–; 23:5–6—(D) OT, *Ecclesiasticus*, 18:30–32; 19:1–3; 23:6

NEW TESTAMENT: *Luke*, 1:13–17; 8:5–15; 16:19–25 / *Romans*, 1:18–32; 8:1–13; 13:13–14 / *I Corinthians*, 5:9–13; 6:13; 7:9; 7:36–8; 9:24–27 / *Galatians*, 5:16–25 / *Philippians*, 3:18–19 / *Colossians*, 3:5–8 / *I Thessalonians*, 4:3–7 / *I Timothy*, 4:1–10; 5:6 / *II Timothy*, 3 / *Titus*, 2:11–5; 3:3 / *Hebrews*, 11:24–26 / *James*, 4:1–6; 5:5 / *I Peter*, 4:1–5

5 EURIPIDES: *Alcestis* [782–802] 244a / *Cyclops* [139–174] 441c-d; [495–589] 444d-445d

5 ARISTOPHANES: *Birds* [685–800] 551b-553a / *Plutus* [415–6 8] 633d-636d; [8 2–822] 638

7 PLATO: *Phaedo*, 223d-225a / *Republic*, BK X, 439b-440 / *Timaeus*, 474b-d / *Philebus* 635-639a c / *Laws*, BK II, 656c-658b; BK 689d-690; BK VII, 715d-716a; BK VII, 737c-738c / *Seventh Letter*, 801b-c; 806a

9 ARISTOTLE: *Ethics*, BK I, CH 5 340d-341b; K III, CH 1 364b-366c; K X, CH 9 [1179 2–18] 13] 434 d

12 LUCRETIUS: *Nature of Things*, K II [1–54] 15a-d

12 EPICTETUS: *Discourses*, K III, CH 10 185d-187a; 1 15 190a-191a; CH 22 195 201a; CH 24 203c-210a; BK IV, CH 4 225 228a; C 6 230b-232c

12 AURELIUS: *Meditations*, K II, SECT 6 261a-c; SECT 2 262b-c; SECT 16 262d-263a; BK V, SECT 8–9 269d-270c; BK III, ECT 10 286b

14 PLUTARCH: *Alcibiades*, 161d-162b / *Demetrius*, 732d-733a; 747b / *Antony*, 751b-c; 755d-756c; 757-758c / *Antony-Demetrius*, 780c-d

17 PLOTINUS: *First Ennead*, TR IV, CH 4 16 14a-19b

18 AUGUSTINE *Conf ss ons* BK II par 2 8 9b 10d BK VIII par 26-27 60b c / *C ty of God* K I CH 16-18 139 140d
19 AQUINAS *Summa Theologica* PART I Q 18 A 2 R P 2 105c 106b Q 26 A 4 ANS 151c 152 c PART I II Q I A 6 REP I 614a-c A 7 ANS 614c 615a
20 AQUINAS *Summa Theologica* PART II-II Q 179 A 2 REP I 3 607a-c Q 186 AA 3-5 652d 657d PART III SUPPL Q 8 A 4 REP 4 966d 967d
21 D NT *Di i e Comedy* PURGATORY XVII [127 139] 79d XXX XXXI 99b 102b esp XXXI [22-63] 101 PARAD SE XI [I 12] 122a
22 CHAUCER *Prologue* [285-308] 164a b / *Wife of Bath s Prolog e* [5583-5774] 256a 259a
23 HOBBES *Let athan* PART II 155d 156a
24 RABELAIS *Gargantua a d Pa t g uel* BK I 46a-49c 60c 66b esp 65c 66b BK II 1 6a d
25 MONTA GNE *Ess ys* 28a d 109d 112a 128c 129d 162 167a esp 165c 167a 406a-408b
26 SHAKESP AR *Lo e s Labour s Lost* ACT s I [I 62] 254 256a / *Ist Henry IV* ACT I SC II [I 116] 435 436c
30 BA ON *Advancement of Lea ning* 7d 8b 54a b 69d 74b esp 71d 72a 73c 74a
32 MILTON *Il Pensero o* 21a 25a esp [156-176] 24b 25a
40 G B ON *D cl e a d Fall* 38a b 60a c 192 193c 593b d 599a
41 G B ON *Decl and Fall* 174c 175c
43 MILL *Liberty* 296b c / *Util tar a ism* 448a 449
47 GOETHE *Faust* P RT I [1765-1775] 42a
51 TOLST Y *War and Pea e* BK V 273 274a BK VII 321d 322d 329c 333a 334d 335a 336b 337d
52 DOSTO VSKY *B others Karamazo* esp BK 1a 7a BK II 15a-45d BK II 50c 62a 64 73b K IV 88d BK VI 146b d 170d
54 FR UD *General I t odu tion* 624a 625b / *C l att n a d Its Discontents* 772 774d esp 772d

8 The discipl ne of plea ure

8 Plea ure nd p in n relation to virt e the r straints of temperance and the endur a ce of co rage

OLD TESTAMENT *Pr verbs* 7 6-27
AP CR PHA *Ec les a ticu* 9 5-(D) OT *Ec le sticus* 19 5
N W T S AMENT *J mes* I 2 16
4 HO R *Odys ey* 183a 322d esp BK IV [265-295] 201d 202a BK V [92 4] 209d 210b [18 493] 210d 213a c K X [82 I 4] 230 BK XII [53 0] 251d 252b BK XX [-55] 296a-c
5 AES HYLU *Ag memnon* [160-183] 53d 54a
5 SO OCLES *Ph loct tes* 182 195a c p [316-1347] 193d 194 [4 8 444] 194d 195
6 THU YD ES *Peloponnes an War* BK II 397b c
7 PLATO *Laches* 32c / *Pha drus* 120a 122a / *Gorgias* 275d 285a / *Republ* BK IV 347a 348d BK VI 374a c BK VII 389d 390b BK IX 421a-425b / *Timaeus* 474b d / *Laws* BK I 644b 645c BK II 653a c 657b 658b BK I 669b 670c BK V 689c 690c BK VII 713d 716a BK VIII 737c 738c BK IX 748a / *Seventh Letter* 807a 814b
8 ARISTOTLE *Top cs* BK VI CH 8 [146^b24 27] 200d / *Phys cs* BK VII CH 3 [246^b20-247 19] 330a b
9 ARISTOTLE *History of Animals* BK VII CH I [581^b11 22] 107b / *Eth cs* BK I C I 5 340d 341b CH 8 [I 99^{a}7 30] 344c d BK I CH 2 [1104 9] c 3 [I 5 16] 349c 350c CH 7 [1107^b3 8] 353a [1108 23 9] 353d CH 9 354d 355 c BK I CH 4 359a c CH 6-12 361a 366a c K IV CH 6 373d 374b CH 8 375a d BK VI CH 5 [1140^b11-19] 389b-c BK VII CH 4 10 398a 403 CH [1153^a27 36] 404c d BK X CH 4 419a-420a pas m H 9 423a 424b p ssim BK X C I I 426a c CH 3 [1173^b32-1174 I] 428 b CH 5 [176 3- 9] 430c d H 6 [1176^b8 77 I] 431a / *Pol t cs* BK VIII CH 5 [134 I 28] 545c d / *R torie* BK I CH 9 [1366^b14-16] 609a
1 EPIC US *D scourses* BK II CH 21 194a b CH 24 203 210a
12 AURELIU *Med tations* BK II S CT 10 II 257d 258b BK III S CT 6 261a SE T 16 262d 263a c BK V SECT 6 272c BK VII SE T 16 280d BK V I SE T 10 286b SECT 8 287 ECT 39 288c SECT 47 289b BK X SECT I 291 -c
14 PLUTA CH *Per cles* 139a 140d / *Cor ola us* 184a / *Ag s laus* 489d-490b / *Demetr us* 747b / *Anto y Demetr us* 780 d
19 AQUINAS *Summa Tl l g ca* PART I Q 98 A 2 ANS and REP 3 517d 519a PART I II Q 31 A 8 R P I 758b 759 Q 32 A 6 762d 763c Q 34 A I 768c 769d A 4 771c 772b Q 35 A 6 REP 3 777b 778 Q 39 AA I 2 790a 791b A 3 ANS a d REP 2 791b 792a
20 AQUIN *Summa Theolog* PART I- I Q 59 A 3 47c-48 Q 60 A 4 AN 52b 53a A 5 AN 53a 54d Q 6 A 2 N 55 56b A 3 ANS 56b 57a A 4 57a 58b Q 74 A 6 132b-133 A 8 134b 136a Q I 7 A 4 ANS 329d 330d PART II II Q 5 A 3 453 454 QQ 35-36 562d 570c Q 46 A 3 604d 605 C PART III Q 15 AA 5-6 791d 793
21 DANTE *Di Comedy* HEL V [I] VI I [64] 7a 11 X [67-90] 15d 16a PURGA ORY XVI [8 -I] 77d XVII [91]-XV I [75] 79b 80 XIX XXVI 81 94 esp X X [-69] 81c 82 XXX XXXI 99b-102b esp XXX [-63] 101 -c P R IS I [3 14] 107b-d
22 CH U R *T le f M l beus* par 4-7 401b-402b

(8 *The discipl ne of pleasure 8a Pleasure and pa n n relat on to v tue the restra ts of temperance and the endurance of courage*)

23 HOBBES *Leviathan* PART II 138d 139a 163d 164a
24 RABELAIS *Gargantua and Pantagruel* BK I 65c-66b BK IV 234a 240a
25 MONTAIGNE *Essays* 28a d 71a 72a 89b-91b 109c 112a 118a 119d 162c 167a esp 165c 167a 200d 205b 234b c 350d 351b 353 354b 365b 367b 392a b 394a 395b 406 -408b 424d 426b 431 -432d 474b d 537d 543a c esp 540c
30 BACON *Advancement of Learning* 71d 72a
31 SPINOZA *Ethics* PART IV PROP 4 73 437a 447a
32 MILTON *Areopagitica* 390b 391a
33 PASCAL *Provincial Letters* 64b 67b / *Pensees* 160 202a b
35 LOCKE *Human Understanding* BK II CH XXI SECT 35 186b d SECT 59 193d 194a SECT 71 197b 198a
37 FIELDING *Tom Jones* 9a c
38 ROUSSEAU *Inequality* 330d 331b 343d 345c
40 GIBBON *Decline and Fall* 192b 193c 596c 597a
42 KANT *Pure Reason* 173c d / *Pref Metaphysical Elements of Ethics* 368d 369a
43 MILL *Utilitarianism* 461c-464d
44 BOSWELL *Johnson* 116b
49 DARWIN *Descent of Man* 315c 317a esp 316c
51 TOLSTOY *War and Peace* BK I 15b 16a BK II 122b c BK V 201a c 203a d BK VI 245b c 248b 250a BK VIII 321d 322d 336b-337d BK IX 369c d BK X 426b BK XI 481a 482a BK XII 551d 554a BK XIII 577a 578b BK XIV 605b d EPILOGUE I 652a
52 DOSTOEVSKY *Brothers Karamazov* BK XI 343d
54 FREUD *Civilization and Its Discontents* 793a 794b / *New Introductory Lectures* 831b

8b The conflict between pleasure and duty or the obligation of justice the pleasure principle and the reality principle

OLD TESTAMENT *Proverbs* 5 1 13 6:23 35 7 6-27 21 7 23:20- 1,29-35 / *Ecclesiastes* 1 16-17
APOCRYPHA *Ecclesiasticus* 18 30 32 19 1-5 31 12 31 37:29-31—(D) OT *Ecclesiasticus* 18 30-32 19 1-5 3 12 42 37 32-34
5 EURIPIDES *Hippolytus* [373 430] 228b d
6 THUCYDIDES *Peloponnesian War* BK V 506b
7 PLATO *Republic* BK II 311a 315d / *Laws* BK X 748a-c
12 EPICTETUS *Discourses* BK I CH 3 108b c BK II CH 11 150 151b CH 19 167 164b BK III CH 2 177c 178d CH 10 185d 187a CH 24 203 210a
12 AURELIUS *Meditations* BK I SECT 6 261a c BK VI SECT 2 274a BK VII SECT 44 282b-c SECT 55 283b-c BK VIII SECT 10 286b SECT 19 286d 287a SECT 32 287d 288a BK IX, SECT 1 291a c
32 MILTON *Paradise Lost* BK VIII [500-6] 243a 245b
33 PASCAL *Provincial Letters* 64b-67b
42 KANT *Pure Reason* 234c 240b esp 235a b, 238c 239a / *Fund Prin Metaphysic of Morals* 253a 287d esp 256c 257d 258d 259a 261c d, 262a 263c 267b d 282b-283d 286a-c / *Practical Reason* 291a 361d esp 298a 300a 304d 307d 325a 327d 329a 331a 338c 355d / *Pref Metaphysical Elements of Ethics* 365a 379d esp 365b 366d 369c 373b / *Intro Metaphysic of Morals* 387b 388c / *Judgement* 4 8a 479d 584d 587a esp 586a 587a 588b [fn 1] 591b 592a 594c 596c
43 MILL *Utilitarianism* 452b-456 passim 4 c 461c passim 464d-476a c passim
47 GOETHE *Faust* PART I [3025 3072] 73b 74b [3217-3373] 79a 82a
49 DARWIN *Descent of Man* 309c 314c passim, esp 310d
54 FREUD *General Introduction* 452c d 57[illegible]a 592c 593b 599b-d 624a 625b / *Beyond the Pleasure Principle* 640b d / *Ego and Id* 70 c d / *Civilization and Its Discontents* 768b-c 772b-d 784a d 799c 800a / *New Introductory Lectures* 837d 839b esp 838a b

8c Perversions or degradations in the sphere of pleasure and pain sadism and masochism

OLD TESTAMENT *Genesis* 19 4 11 / *Exodus* 22 19 / *Leviticus* 18:22 23 20 13 16 / *Deuteronomy* 27:21
NEW TESTAMENT *Romans* 1:26-32
5 EURIPIDES *Bacchantes* 340a 352a c
7 PLATO *Laws* BK I 645d-646c BK VIII 735d 738b
9 ARISTOTLE *History of Animals* BK VII CH 1 [581b11 22] 107b / *Ethics* BK VII CH 5 399a d CH 6 [1149b24 1150 8] 400b-c BK X CH 5 [1,6 15 25] 430 d
12 EPICTETUS *Discourses* BK I CH 3 108b-c
14 PLUTARCH *Dion* 783c 784a
15 TACITUS *Annals* BK VI 86a b BK XI 103b-c 107b-c 108b c BK XIV 145 d 146b 147a BK XV 166b-c / *Histories* BK II 265a b
18 AUGUSTINE *Christian Doctrine* BK II CH 18-21 664d 666b
19 AQUINAS *Summa Theologica* PART I II Q 31 A 7 757c 758b
20 AQUINAS *Summa Theologica* PART II Q 63 A 1 REP 5 879c 881d PART III SUPPL, Q 81 A 4 R 4 966d 967d
21 DANTE *Divine Comedy* HELL, XI [22-90] 15b-16a XV-XVI 21a 23d XVII [-99] 25b 26b PURGATORY XIX [-69] 81c 82a
25 MONTAIGNE *Essays* 89d 90c 118a 122a 166b 167a 427b-d

27 SHAK SPEARE *Sonnets* cxxix 606a
31 SPINOZA *Ethics* PART III THE AFF CTS DEF 48 EXPL 421b d PART IV APPENDIX XIX 449a
3 M LTON *Parad e Lost* BK IX [990 1133] 269a 272a
36 SWIFT *Gull er* PART II 67b
40 GIBBON *Decl ne and Fall* 38a b 60a-c 138d 139a 389b c 484c d 649c 650b
41 GIB ON *De lin nd Fall* 93d 94a 169a b 174c 175c
44 BOSW LL *Johnson* 355a
46 HE EL *Philo ophy of Histor* PART II 292b d
51 TOLSTOY *War and Peace* BK IV 174b 188a 190c BK VI 267 d 271c 273c BK VIII 305b-307d K XI 505a 511b 520b-c EP LOGUE I 660d 661b
52 D TOEV KY *B thers Karam ov* BK I 4a d BK II 39a-40a BK V 121d 127b esp 122d 123a BK XI 307 310c
53 JAM *P chol g* 718a 720b
54 I R UD *Origin and Development of Ps h A lys* 16d / *I terpretation of D eams* 204b-c / *Inst ncts* 415d 418c / *Gener l Intro duct n* 570a 572d 577a 579d p m / *C v l zation and Its D scontents* 790a 791b / *New Introductory Lectures* 847c-849b passim 850a b

9 The regul t on of ple sures by law

O D TE TAMENT *Exod s* o 14 17 / *Deuteron my* 5 18 21 21 8 21
NEW TE TAMENT *Matthew* 5 27
5 EURI IDES *B cchantes* 340a 352a c esp [15-369] 341d 343a
7 P ATO *Gorg s* 283a 285a / *Republic* BK I 320c 328a K IV 348a d BK X 432 434c / *Laws* K I-II 643b 663d e p BK 663b d BK III 675 676b BK V 708 709a 712b K V I 713 716b esp 713c 716a b 718c 720d BK VIII 731d 738c
9 ARISTOTLE *Ethi s* BK V CH [1 9^b19-24] 377 K X CH 9 [1179^b31 118 13] 434c d / *P l tics* BK II H 9 [1269^b13- 270 4] 465d 466b BK VI CH 17 [1336^a23-^{b}24] 541b d
14 PLUT R *I yc gus* 32 -48d esp 36b 37b / *Lycurgus Numa* 61b d 62c
15 T C TU *A nal* K II 31a b K III 57b 58d
20 AQUINAS *Summ Th olog c* ART II Q 100 A 4 NS nd R P 3 253d 255a A 5 R 5 255 257c
21 DANTE *D v C medy* UR ATORY XVI [85-114] 77d 78a
25 MON A GN *Essay* 131b 132a
27 SHAK P AT E *M u for M asu e* 174a 204d passim esp ACT I SC [22 27] 181a c ACT I S I [91 8] 190c d
30 BACON *Ad em t f Le g* 54 b
32 MILTON *A eop gu* 390 b 393 395b
35 LOCKE *T lerat o* 8c d
38 MONT QUIEU *Sp t of Laws* BK V 19a d BK VII 44d 47a 47c-48a 49a 50c BK XII 86b 87c 88 BK XIV 105c 106b BK XVI 119d BK XXV 210a b
38 ROUSSEAU *Social Co tract* BK IV 434b 435a
39 S I H *Wealth of Nations* BK II 149d 150a BK IV 211a b
40 GI BON *Decl e and Fall* 100c 101b 484c d
41 GIBBON *Decl ne a d Fall* 93d 94a
43 CONSTITUTION OF THE U S AMENDMENTS XVIII 19c XXI 20b
43 FEDERALIST NUM R 12 58b-c
43 MILL *Liberty* 302d 312a 314b 316b
44 BOSWELL *Johnson* 301c d
54 FREUD *Group P chology* 690b-c

10 The social ut lity of ple sure and pain

10a The employment of pleasure nd pain by parent or teacher in moral and mental training

OLD TESTAMENT *Pro erbs* 13 24 19 18 2 15 23 13 14 29 15
APOCRYPHA *Eccles asticu* 30 1 12 pass m—(*D*) OT *Eccles a t cus* 30 1-12 passim
5 ARISTOPHANES *Clouds* [303 1464] 504b 506c
7 PLATO *Protagoras* 46b / *Republic* BK I 339b 340b / *Laws* BK I 653a 663d esp 653a 656c 662 663d BK VII 713d 716a
9 ARISTOTLE *Eth s* BK CH 3 [1104^b8 18] 350a BK X C I I [1 2 18 23] 426 CH 9 [1179^b20-1180 4] 434 d
18 AUGUSTINE *Co fe sions* BK I par 14 23 4 7a / *C ty f God* K XIX CH 16 521d 522a
19 AQU NA *Summa Th l g ca* ART Q 48 A 6 CONTR RY 264 d
20 AQU N *Summa Theol g ca* PART I Q 95 A AN 226c 2 7c Q 99 A 6 ANS 250a 251a
24 RA ELAIS *G gant a a d Pa tagruel* BK I 26d 30c esp 30b c
25 MONTA GNE *Essays* 16c d 70d 74a 90d 91a 185 d
31 S INO A *Et ics* P R III P OP 55 SCHOL 413b d THE A EC DEF 27 EXPL 419a b
41 GI ON *D l and F ll* 40d 41a
42 KANT *Fund P M t ph s of Morals* 264b [f 1] / *P ct cal Re son* 357c 360d
43 M LL *L berty* 287b / *Ut l t r sm* 463c 464d
44 BOSWELL *J h son* 191b 199 200d 309c d 448a b
51 TO STOY *War a d P ace* K I 47b-48d BK V 306b
53 JA I S *Psy h logy* 290a 291a
54 FREUD *War d D ath* 759b / *New I tro ductory Lectu s* 876c

10b Th use of ple ure and p n by or to o t t m n n pe s a on and go e nment

7 PLATO *P t g* 45b-d / *Ap l g* 208 209b 210b d / *G g s* 260 262a / *Sop*

(10 *The social util ty of pleasure and pa n* 10b *The use of pleasure and pa n by orator or statesman i persuasion a id government*)

554c d / *Laws* BK I 640a 652d esp 650c 652d

9 ARISTOTLE *Eth cs* BK II CH 3 350a-c BK VII CH II [1152b1-3] 403c BK X CH 9 [1180 I 13] 434d / *Rhetor c* BK I CH 2 [1356 14 18] 595c BK II CH I [13,8a20]-CH II [1388b30] 623b-636a

14 PLUTARCH *Per cles* 125b 130d / *Caesar* 578b 579a 598d 599b / *Marcus Brutus* 810d 811a

15 TACITUS *Hi tories* BK IV 269d 270b

20 AQUINAS *Summa Theologica* PART I II Q 99, A 6 250a 251a

23 MACHIAVELLI *Prince* CH VIII 14a-c CH XII, 33a

23 HOBBES *Levia han* PART I 82b-d PART II, 109b 128a b 145a 147b passim

25 MONTAIGNE *Essays* 176a-c 181d 183a

30 BACON *Ad ancement of Learning* 23a 26a

33 PASCAL *Geometrical Demonstration* 440b-442a

37 FIELDING *Tom Jones* 320c 321b

40 GIBBON *Decline a d Fall* 79a b 139b-140c 502c 503a

42 KANT *Judgement* 535b-c

51 TOLSTOY *War and Peace* BK VI 245a-c

CROSS REFERENCES

For The relation of pleasure and pain to sensations and emotions *see* EMOTION 1a SENSE 3c(2)

The discussion of intellectual pleasure with respect to beauty and truth *see* BEAUTY 4 EDUCATION 5e KNOWLEDGE 8b(4)

Another discussion of the kinds of pain *see* PUNISHMENT 1a

The aspect of infinity in the desire for pleasure *see* DESIRE 7a(1)

The problem of pleasure and pain in relation to good and evil *see* GOOD AND EVIL 3d 4a 4c and for the conception of pleasure as an object of desire and as the satisfaction of desire *see* DESIRE 2b 2d

The problem of pleasure in relation to happiness *see* HAPPINESS 2b(2)

Other discussions of pleasure and pain in relation to moral virtue *see* COURAGE 1 3 PUNISHMENT 3a TEMPERANCE 1 2 VIRTUE AND VICE 5a and for the consideration of asceticism and pleasure seeking *see* TEMPERANCE 6a-6b

The conflict between duty and pleasure *see* DUTY 8 and for the basic issue between an ethics of duty and an ethics of happiness *see* DUTY HAPPINESS 3

Pleasure and pain in relation to friendship and love *see* LOVE 1b

Another discussion of pleasure in relation to law *see* TEMPERANCE 5c

The role of pleasure and pain in moral training *see* PUNISHMENT 3a VIRTUE AND VICE 4d( )

ADDITIONAL READINGS

Listed below are wo ks not included in *Great Books of the Western World* but relevant to the idea and topics with wh ch this chapter deals These wo ks are divided into two groups

I Works by autho s rep esented in th s collect on

II Wo ks by auth rs not represented in this collection

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I

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J S MILL *An Exam nat n of Si W ll am Ham l t s Philosophy* CH 25

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Chapter 69 POETRY

INTRODUCTION

THE spirit in which the great poets have read their predecessors differs remarkably from the attitude toward the past which prevails in other fields The philosophers and scientists frequently feel assured that they can improve upon their predecessors The poets for the most part wish only to do as well Virgil s admiration for Homer Dante s accolade to Virgil Milton s praise of Aeschylus Sophocles and Euripides as the three tragic poets unequalled yet by any the tributes which Cervantes and Fielding pay to the poets of antiquity—these testify that there is no battle between the modern and the ancient books of poetry

Contemporary novelists and dramatists—especially those who are proud of their innovations in the forms or materials of poetry—may constitute an exception But they would still be the exception to a rule which can be verified for almost all the great books of poetry Part of the reason for such unusual accord may be that in the tradition of the great books one book enjoys the unique distinction of having founded the science of poetry More than that it seems to have gained from the poets a large measure of approval and even adherence to its principles during a period of more than 2000 years

Not that Aristotle s *Poetics* is without sources They exist in Plato s comments on the kinds of poetry in Aristophanes critical weighing of Aeschylus and Euripides and of course in the original inventions of Homer and the great dramatic poets both tragic and comic Not that the acceptance of Aristotle s theory of poetry is unaccompanied by some dissent as for example in Fielding s quarrel with the rules about the unities of time and place But Fielding like Cervantes who is another close student of the *Poetics* more frequently adopts than rejects Aristotle s basic insights His most rebellious protest—that the originality of creative genius cannot be bound by the laws of art or held accountable to any established critical standards—would certainly receive sympathetic consideration from the man who formulated the rules of poetry and its measures of excellence by the study of the productions of Greek genius

One way in which later poets have expressed their disagreement with the *Poetics* confirms Fielding s insight Those who have violated its rules and yet produced great poems have been men of exceptional genius Where the genius has been lacking to create new forms the violation of the rules has usually resulted in formlessness But it is not only in the creative work of the poets that Aristotle s principles have been put to use and tested His influence also appears in the comments which the poets make on the nature and purpose of poetry The terms and distinctions of the *Poetics* are reflected in the writings of Dante Chaucer Shakespeare Milton Goethe and Melville as well as in many essays in criticism from Horace and Demetrius to Boccaccio Boileau Dryden and Pope

Socrates once complained of the wisdom of the poets Those whom he asked about their poetry were tongue tied They finally resorted to the mystery of inspiration or the inscrutability of genius There is hardly a person present he tells his judges in the *Apology* who would not have talked better about their poetry than they did themselves The poets of a later age were through benefit of Aristotle better able to discourse analytically of their art

IF WE TURN FROM the poets themselves or rather from their poems to the analysis of poetry—by poets or others—we find a number of major issues On what poetry is and on the end it serves the tradition does not seem to be either unified or harmonious Basic disagreements begin with the ancients

On the question for example whether the poets have the same obligation to speak the truth—and the same kind of truth—as do philosophers or scientists Plato and Aristotle seem to be opposed On the question whether the art of poetry lies in its use of language or is primarily the craft of fiction Aristotle s *Poetics* and Horace s *Art of Poetry* represent the op posite answers which have been points of departure for divergent discussions of poetry throughout the whole tradition of western thought

With regard to the second of these two ques tions it may be wondered whether we are in the presence of the sort of disagreement which requires us to take one side rather than the other The fact that Aristotle in his *Rhetoric* writes about poetry in a vein contrary to the theory he advances in his *Poetics* would suggest the possibility of different but not inconsistent points of view about poetry Unless Aristotle unwittingly contradicts himself the rhetorical consideration of poetry is simply a different way of conceiving what is poetic

In the *Adv ncement of Learning* Bacon re cords this difference in the meaning of poetry which had become traditional by his time He treats it moreover as the sort of difference which does not require the rejection of either alternative as incorrect Poetry he writes can be taken in two senses in respect of words or matter In the first sense it is but a character of style and belongeth to the arts of speech and is not pertinent for the present In the latter it is (as hath been said) one of the principal por tions of learning and is nothing else but feigned history which may be styled as well in prose as in verse.

When Bacon says that the conception of poetry as a literary style—as an art of writing in verse rather than prose— is not pertinent for the present he does not reject that al ternative entirely He merely postpones it for the later section of his work in which he treats of grammar and rhetoric. The other alternative —poetry as feigned history —is germane to his present consideration of the kind of learn ing Just as Aristotle does not set his *Rhetoric* against his *Poetics* on the nature of poetry so Bacon does not exclude one of these concep tions in favor of the other when he observes how different are the principles and considera tions appropriate to each

These two points of view about the nature of poetry are not always treated in this way Sometimes one or the other is taken as the primary or even the only way of approaching the subject and then a genuine issue ensues—either with those who take the excluded point of view or with those who find it possible to em brace both The Alexandrian and Roman critics seem to create such an issue by considering poetry largely in terms of style Modern criti cism especially since the beginning of the 19th century goes even further in the direction of identifying poetry with verse

When Wordsworth discusses the art of poet ry in his preface to *Lyrical Ballads* he is con cerned largely with its language His definition of poetry as emotion recollected in tranquili ty indicates his emphasis upon the lyrical as pect of even narrative poetry When Edgar Allen Poe writes his *Poetic Principle* and Mat thew Arnold his *Essays in Criticism* each is con cerned almost exclusively with lyric poetry with that kind of poetry which is written in verse rather than prose The poet tends to be-come more and more a composer of verses—so much so that the free-verse movement can ap pear to be a great revolution in poetry In the *Brothers Karama ov* Smerdyakov says Poetry is rubbish At Maria s protest that she is very fond of poetry he adds So far as it s poetry it s essentially rubbish Consider yourself who-ever talks in rhyme?

Just as the word art has come in popular usage to mean only painting and sculpture so its sister word poetry has also narrowed in significance Contemporary readers who are ac customed to think of poems a lyrics and of poetry as verse may be surprised to learn that according to the significance of its Greek root the word poetry can cover all the forms of art or human productivity they are just as likely to be surprised by the reference to novels and plays written in prose as poems Yet in the tradition of the great books novel sts like Cervantes Fielding and Melville call them selves poets The great books cons d r poetry primarily as narrative rather than lyrical as story rather than song

This does not mean that they e clude the

other consideration of poetry Fielding for example says in one place that poetry demands numbers or something like numbers (i e metre) but for the most part he insists that the art of the novelist or romancer lies mainly in the invention of good stories not in the mastery of rules of prosody which apply only to poems of the lyric sort written in verse Speaking of the sweet influence which melody and rhythm by nature have Plato may observe what a poor appearance the tales of the poets make when stripped of the colors which music puts upon them and recited in simple prose but for Plato as for Aristotle the poet is a teller of tales either in prose or in verse

Aristotle does not ignore the devices of language In the third book of the *Rhetoric* where he considers problems of style in all sorts of compositions he distinguishes poetic from prosaic writing and in the *Poetics* also he devotes a few chapters to style But when in the latter case he deals with the language of poetry he is not concerned with the style of any sort of composition but only of dramatic and epic narratives Except for a brief mention of the form of verse known as the dithyramb Aristotle does not discuss the isolated lyric as a kind of poetry He treats song and spectacle merely as embellishments of the drama In the *Poetics* his emphasis is not upon the devices of language or the sentiments of the poet but upon the construction of plot the development of character the diction and thought of the characters—in short upon the subject matter of the poem rather than upon the feelings of the poet and the eloquence with which he expresses them

Because he regards plot as the soul of tragedy —and by extension the primary principle of all narrative poetry— Aristotle insists that the poet or maker should be the maker of plots rather than of verses He is therefore led to criticize the confusion—apparently prevalent in his day as in ours—which he thinks results from identifying the art of poetry with skill in writing verse Even when a treatise on medicine or natural science is brought out in verse he writes the name of poet is given by custom to the author and yet Homer and Empedocles have nothing in common except the metre so that it would be better to call the one poet the other physicist rather than poet

Just as Bacon later remarks that a true narrative may be delivered in verse and a feigned one in prose so Aristotle says that the poet and the historian differ not by writing in verse or in prose The work of Herodotus might be put into verse and it would still be a species of history with metre no less than without it

That the difference between prose and verse may affect the style of writing but not the essence of storytelling is a point which has wide acceptance among writers who call themselves poets In the Prologue to Melibeus Chaucer's host commands him to leave off rhymin and tell a tale in prose—you might do worse—wherein there's mirth or doctrine good and plain Thinking of his *History of Don Quixote* as a species of epic poetry Cervantes declares that epics may be as well written in prose as in verse

The use by Cervantes and Fieldin of the word history in the title of their novels indicates the acceptance of the other point in the conception of poetry by reference to its subject matter rather than to its linguistic style The great poets recognize that as narrative their works resemble histories but they also know that the stories poets tell are in the words of Bacon imaginary history Just as Fielding writes at length in mock justification of himself as an historian so Melville touches upon the plain facts historical and otherwise of whale fishery lest someone scout at Moby Dick as a monstrous fable or still worse and more detestable a hideous and intolerable allegory In his chapter on the Leviathan's tail he says Other poets have warbled the praise of the soft eye of the antelope and the lovely plumage of the bird that never alights less celestial I celebrate a tail

The conception of poetry as feigned or imaginary history seems to have a direct bearing on the question of the poet's obligation to speak the truth We shall return subsequently to other aspects of the comparison of poetry with history and philosophy For the present we are concerned with the issue in the theory of poetry which arises from applying the standards of knowledge to the inventions of the poet

Bacon like Aristotle denies that such standards are applicable Though he treats poetry as

a part of learning he holds that it is only re strained in measure of words in all other points it is extremely licensed and doth truly refer to the imagination which being not tied to the laws of matter may at pleasure join that which nature hath severed and sever that which nature hath joined Kant on the other hand like Plato judges poetry in terms of its contribution to knowledge A thing of the imagination poetry he maintains serves the understanding for it conducts a free play of the imagination as if it were a serious business of the understanding

Though the *poet* promises merely an enter taining *play* with ideas Kant continues yet for the understand ng there enures as much as if the promotion of its business had been his one intention He achieves a certain combination and harmony of the two faculties of cognition sensibility and understanding which though doubtless indispensable to one another do not readily permit of being united without com pulsion and reciprocal abatement In so doing the poet in Kant s opinion accomplishes something worthy of being made a serious busi ness namely the using of play to provide food for the understanding and the giving of life to its concepts by means of the imagination

Yet Kant and Plato do not agree in their judgment of the poet Regarding the poet s promise as a modest one — a mere play with ideas is all he holds out to us —Kant praises him for achieving more in actual performance than he promises Plato on the contrary seems to think the poet promises more and achieves less He seems to regard the poet not as assisting but as competing with the philosopher The reason why the poet must fail in this attempt is that he tries to do on the level of the imag na tion what the philosopher is better able to do on the level of reason

Both are engaged in a pro ess of imitation— for all knowledge is imitation—but whereas the notions of the philosopher imitate the reality of the Ideas the i nages of the poet imitate sen sible appearances which are themselves imita tions of the Ideas or eternal Forms. Even when it is accurate or truthful poetry must there fore be an inferior form of kno vledge In Plato s terms it is on the level of opin on along with fancy and belief. In any case t mu t sub mit to being judged by the same standards of accuracy as anything else which claims to be knowledge or right opinion Imitations he writes are not to be judged of by pleasure and false opinion They are to be judged of by the standard of truth and by no other what ever The competent judge of poetry must therefore possess three things he must know in the first place of what the imitation is sec ondly he must know that it is true and thirdly that it has been well executed in words and melodies and rhythms

The issue concerning poetry and truth can be most sharply drawn bet veen Plato and Aris totle precisely because Aristotle thinks that poetry is a form of imitation but that knowl edge does not have the character of imitation at all Since poetry is not a kind of knowledge the same standards do not apply to both There is not the same kind of correctness he insists in poetry as in politics —or in medicine or any other special science The poet s art is at fault if he meant to describe the thing correctly but failed through lack of po er of expression But if a technical error in phys iology enters into his description because he meant to describe the thing in some incorrect way (*e g* to make the horse in movement have both right legs thrown forward) then ac cording to Aristotle his error in that case is not in the essentials of the poetic art The poet s obligation is not to be truthful in such particulars but to make his whole story seem plausible Aristotle summarizes his position in the statement of his famous rule concern ing the probable and the possible For the purposes of poetry he says a convincing im possibility is preferable to an unconvincing pos s bility

Connected with this i sue concerning the kind of truth to be expected from the poet is the cont oversy over the purpose of poetry— to instruct or to delight or to do both This in turn relates to the moral problem of the in fluence poetry can have on human character or virtue and to the political problem of the reg ulation of poetry by the state or the right of poetry to be free from such censorship It is not surpris ng that Plato conce ving poetry he does should b nish poets f om the ideal state des ribed in the *Rep blic* or that he should lay

down specific regulations for the content of poetry in the *Laws*

At the opposite extreme are those who like Milton and Mill attack the principle of censorship itself—as applied to poetry as well as to other forms of communication But the traditional defense of poetry in essays bearing that title from the pen of Sidney and Shelley or in the writings of Chaucer Montaigne and Cervantes usually tries to answer Plato by praising poetry as an instrument of moral instruction as well as of delight Waiving the question of its effect upon morals some like Adam Smith answer the sort of criticism Augustine levels against pagan poetry and theatrical presentations by holding the theatre to be a legitimate a lawful even a necessary means of recreation

Some of these issues touch on considerations dealt with in other chapters The problem of censorship is discussed in the chapters on Art and Liberty and the theory of imitation as applied to the arts in general useful as well as fine is discussed in the chapter on Art Here we are concerned with the bearing of that theory upon the nature of poetry The difference we have observed between Plato and Aristotle concerning imitation itself does not seem to affect their use of this notion in treating works of fine art and more particularly poetry What Hamlet tells the players is the purpose of their play— to hold as twere the mirror up to nature —Aristotle says is the aim of such arts as poetry sculpture painting music and the dance which give both instruction and delight through imitation

Within the sphere of the fine arts the distinction of poetry from the others is usually made in terms of the medium of imitation Poetry according to Aristotle imitates through the medium of language painting and sculpture through lines planes colors and shapes music through rhythm and harmony Whether Aristotle s statement that the objects of imitation are men in action applies to poetry alone or to all the fine arts is a question of interpretation to which opposite answers have been given Some commentators seem to think that human action as the object of imitation specifically defines poetry whereas music and sculpture have distinct objects as well as distinct mediums of imitation Others hold that human action is the object of imitation common to all the arts

However this issue is resolved the differentiation of the kinds of poetry can be made neither in terms of the object nor the medium of imitation but only in terms of the manner The medium being the same and the object the same Aristotle writes the poet may imitate by narration—in which case he can either take another personality as Homer does or speak in his own person unchanged—or he may present all his characters as living and moving before us

Plato makes the same distinction pointing out that the Homeric type of poetry combines both the discourse of the poet and the discourse of his characters in dialogue He calls stage plays pure imitations in the sense that the author never speaks directly but tells his story entirely through the actions and speeches of the characters whereas the type of poetry which he calls narrative as opposed to imitative may combine both methods of storytelling or may in some extreme instances never resort to dialogue at all

Since all storytelling is narration and since all poetry is imitation it seems slightly confusing to call the two major types of poetry narration and imitation as Plato sometimes does or narrative and dramatic as Aristotle sometimes does Bacon also speaks of narrative and dramatic or representative poetry He defines narrative poetry as such an exact imitation of history as to deceive did it not often carry things beyond probability and dramatic poetry as a kind of visible history giving the images of things as if they were present whilst history represents them a past

The difficulties of language seem to be removed by other terms which both Plato and Aristotle use to express the main distinction The manner of storytelling exemplified by Homer which either employs direct narration without dialogue or combines both is *epic* poetry That which uses dialogue alone is *dramatic*

These words— epic and dramatic —may have their difficulties too especially for the contemporary reader unless a number of these are remembered First epics and dramas may

be written either in prose or verse Second the arts of theatrical representation are auxiliary to the art of the dramatic poet The writing of a play is completely independent of its acting the production of spectacular effects depending as Aristotle says more on the art of the stage machinist than on that of the poet Third epic poetry differs from dramatic poetry in other respects than the use of indirect discourse as well as dialogue

On this last point Aristotle observes that all the elements of epic poetry are found in drama whereas the dramatic form may include the embellishments of song and spectacle in addition to plot character thought and diction Even more important is his distinction of the two in terms of the unities of time place and action Because it need not be limited at all in time and place epic narration may have a much more complicated plot structure or even as Aristotle says a multiplicity of plots

With this understanding of the distinction between the two major types of storytelling we can see why the great novels of Cervantes Melville Tolstoy and Dostoevsky should be classified as epic poems and were apparently so conceived by their authors at least in the cases of Cervantes and Melville As measured by the magnitude of its plot—its reach in time and its scene the whole universe from Heaven through the world to Hell —Goethe s *Faust* even though dramatic in manner seems to be no less epic in its structure and proportions than the poems of Homer Virgil, Dante and Milton The story of a single white whale can be epic in its immensity if the storyteller like Melville makes it include the whole circle of the sciences and all the generations of whales and men and mastodons past present and to come with all the revolving panoramas of empire on earth and throughout the whole universe not excluding its suburbs

ANOTHER TRADITIONAL divis on in the kinds of poetry is that between the tragic and the comic. This distinct on is variously expressed Fielding sees the difference in terms of the misery or happiness to which the poet brings his principal characters in the end Speaking of tragedy alone M lton says that it has ever been held the gravest moralest and most profitable of all other poems In similar vein Marcus Aurelius praises tragedy for reminding men of the things which happen to them and that it is according to nature for things to happen so He does not admit comedy to be of equal worth thou h he does look with some favor upon the older forms of comedy which were useful in reminding men to beware of insolence

According to Aristotle comedy represents men as worse tragedy as better than in actual life He describes the action which tragic poetry imitates as serious adding that tragedies through pity and fear effect the proper purgation of these emotions Whether comedies also arouse and purge certain emotions Aristotle does not say for his promise to speak more fully of comic poetry is not fulfilled in the *Poetics* Concerning the meaning of the tragic catharsis there are questions enough

Augustine asks How is it that a man wants to be made sad by the sight of tragic sufferings that he could not bear in his own person? The more a man feels such sufferings in himself the more he is moved by the sight of them on the stage Now when a man suffers himself it is called misery when he suffers in the suffering of another it is called pity But ho v can the unreal sufferings of the stage possibly move pity?

Boswell begs Dr Johnson to explain Aristotle s doctrine of the purging of the passions as the purpose of tragedy Why Sir Johnson replies you are to consider what is the meaning of purging in the original sense It is to expel impurities from the body The mind is subject to the same imperfections The passions are the great movers of human actions but they are mixed with such impurities that it is necessary they should be purged or refined by means of terror and pity For instance ambition is a noble passion but by seeing upon the stage that a man who is so excessively ambitious as to raise himself by injustice is punished we are terrified by the fatal consequences of such a passion In the same manner a certain degree of resentment is necessary but if we see that a man carries it too far we p ty the object of it and are taught to moderate th t passion Johnson s interpretation s ems to be more specific th n Milton s notion that to purge the pass ons by tragedy is to temper and reduce

them to just measure with a kind of delight stirr d up by reading or seeing those passions well imitated

It may be arguable whether the difference between tragedy and comedy is well defined by reference to the nobility or vulgarity of the leading characters by the contrast between the pride of the tragic and the wit of the comic hero by the seriousness or lightness of the tragic and comic themes and by the passions appropriate to each In any case it seems clear that this division of poetry crosses the other division into epic and dramatic writing The plays of Sophocles and the *Iliad* of Homer Aris totle observes are tragic poetry yet dramatic and epic respectively in manner but from an other point of view Sophocles is to be com pared with Aristophanes for though the one writes tragedies and the other comedies both are dramatists In the tradition of the great books there are comic as well as tragic epics—Chaucer s *Troilus and Cressida* Rabelais *Gargantua and Pantagruel* Cervantes *Don Quixote* Sterne s *Tristram Shandy* and Fielding s *Tom Jones*—just as there are tragic and comic plays The examination of these suggests that talk rather than action is the essence of comedy

The chief thing which Aristodemus remem bers of Socrates discourse the morning after the banquet in Plato s *Symposium* is Socrates success in compelling Aristophanes and Aga thon to acknowledge that the genius of come dy was the same as that of tragedy and that the true artist in tragedy was an artist in comedy also To this they were constrained to assent being drowsy and not quite following the argu ment Precisely what they assented to has never been entirely clear On one interpreta tion of Socrates remark examples of his point are difficult to find in the great books—except perhaps for the plays of Shakespeare which in the sphere of dramatic poetry seem to repre sent an equal genius for tragic and comic writ ing In the sphere of epic poetry we have only Aristotle s reference to a lost poem of Homer s —the *Margites*—which he says bears the same relation to comedy that the *Iliad* and *Odyssey* do to tragedy

According to another interpretation the in s ght of Socrates is that the totality of the great trag c vision tends to approximate the totality of the great comic vision The same poem may be both tragic and comic because the poet has been able to see far enough into the nature of things to reveal a world which is at once dread ful and ridiculous In this sense *Moby Dick* may be both a tragedy and a comedy Though in many of its aspects Melville writes this vis ible world seems formed in love the invisible spheres were formed in fright but he also re marks that there are certain queer times and occasions when a man takes this whole uni verse for a vast practical joke

In the science of poetics certain principles or rules seem to apply to all the major forms of poetry where others relate specifically to epic or dramatic writing or to tragedy or comedy Aristotle implies that his most general formula tions hold not only for long poems but for dithyrambic poetry as well If that is so they should be capable of extension to other forms of lyric poetry such as for example the sonnets of Shakespeare and Milton and Milton s odes and elegies Yet the two principal elements in Aris totle s analysis of poetry—plot and character—seem superficially at least to belong peculiarly to narrative poems long or short Whether they are present in any comparable manner in the structure of a lyric or whether the form and content of lyric poetry requires an analysis pe culiar to itself are among the most difficult questions in the theory of poetry

In the tradition of the great books there seems to be as already observed general agree ment about the basic rules for writing narrative poetry Since these rules aim to direct the artist toward the achievement of excellence they are also the basic principles of criticism The science of poetics is at once an organon of production and a canon of criticism

The simple rules such as those of plot con struction afford an example A well constructed plot must have a beginning middle and end It must observe certain unities (at least of ac tion if not of time and place) Certain effects it is held can be produced by the use of recognition scenes and reversals of fortune Whether the events narrated are possible or impossible the poet must at least invest them with plausibility or verisimilitude Such rules, formulated by Aristotle and discussed by Cer-

vantes Fielding and others provide standards for judging whether a poem is skillfully made as well as give directions for the attainment of skill by the poet

It may be held of course that the great poet works by inspiration by a divine madness rather than by rule that as Theseus says in *A Midsummer Night s Dream* the lunatic the lover and the poet are of imagination all compact The poet s eye in a fine frenzy rolling doth glance from heaven to earth from earth to heaven and as imagination bodies forth the forms of things unknown the poet s pen turns them to shapes and gives to airy nothing a local habitation and a name But if there is an art of poetry then like any other art it is a thing of rules whether or not genius needs their guidance or can be regulated by them

The pivotal question here is Which takes precedence the creative or the critical faculty? Does Aristotle s rule concerning the primacy of plot derive from the greatest poems of antiquity in which he found this principle observed? Does it set up an infallible measure of excellence in narration or on the other hand do certain modern novels have an impeccable greatness despite their violation of this rule by the emphasis they place on the development of character rather than on the action in which the characters are involved? The rule of probability and necessity may on the other hand be inviolable Not even the most original genius may be able to tell a good story without giving it poetic truth according to the necessities of the characters he has created and the probabilities of the situations in which he places them

ON THE SIDE of language poetic theory seems to draw much from the art of rhetoric The relation of rhetoric to poetics the nature of rhetorical devices such as metaphor and simile the cho ce among existing words or the invention of new ones a e matters dealt with in the chapter on RHETORIC as well as here Aristotle s treatment of these problems both in his *Rhetoric* and his *Poetics* lays the foundation for the traditional association of these two disc plines In both for example he discusses the various modes of metaphor and the r util ty in ach ev ing an expansion of mean ng combined with a contraction of speech

This in turn relates to his general maxim of style which directs the writer to be clear with out being ordinary The clearest style he says is that which uses only current or proper words but in order to avoid being common place or ordinary it must be admixed with lofty diction— raised above the common place by the employment of unusual words

Nothing contributes more to produce a clearness of diction that is remote from com monness than the lengthening contraction and alteration of words Phrases which are not part of current idiom give distinction to style

But the greatest thing by far is to have a command of metaphor This alone cannot be imparted by another it is the mark of genius for to make good metaphors implies an eye for resemblances

One part of Aristotle s theory of style seems to be amplified by Pascal s observation that a certain perfection is achieved by the use of those words which if altered would spoil the discourse In these terms prosaic as opposed to poetic writing does not result from the lack of a fixed metre but rather from commonplace ness or lack of distinction in language This standard of style does not apply to poetry alone for just as history and philosophy may be writ ten in prose or verse so also may they be writ ten poetically or prosaically

Dr Johnson s point that poetry cannot be translated that the beauties of poetry cannot be preserved in any language except that in which it was originally written may be ca pable of the widest generalization It may be ex tended to mean that writing which is poetic cannot be translated into any other form of words even in the same language A poetic sentence in English is untranslatable in this ab solute sense when no alternative Engl sh phras ing is truly its equivalent For example it seems impossible to re state without loss or ruin Shakespeare s Life is a tale told by an idiot full of sound and fury signifying nothing or Hobbes Life in a state of nature is solitary poor nasty brutish and short

The other part of Aristotle s theory of style that concern ng metaphors seems to be con verted by William James into a gen ral d stinc tion between poet c and philosophic thought o what he calls the splend d and the analytic

types of intellect Poetic thought tends to develop the implications of an analogy without giving an explication of its grounds This in James view explains the abrupt transitions in Shakespeare s thought which astonish the reader by their unexpectedness no less than delight him by their fitness Quoting a passage from Homer unfathomably rich in metaphor he says that a man in whom all the accidents of an analogy rise up as vividly as this may be excused for not attending to the ground of the analogy The two types of intellect are rarely found in conjunction—Plato according to James being one of the few exceptions whose strangeness proves the rule

ON THE LEVEL of thought and knowledge as opposed to that of language poetry is traditionally contrasted to philosophy and history As indicated in the chapter on HISTORY historians like Herodotus Thucydides and Plutarch emphasize the difference rather than the similarity the historian is a reporter of fact the poet a creator of fables or fictions The one gains credence by his display of evidence and reasons the other by the intrinsic plausibility of his tale

In a good poem writes Hobbes whether it be epic or dramatic both judgment and fancy are required but the fancy must be more eminent In a good history the judgment must be eminent because the goodness consists in the method in the truth Fancy has no place but only in adorning the style

Bacon associates poetry most intimately with history both being concerned with individuals circumscribed by time and place and differing only as one employs the imagination the other the memory Aristotle on the other hand finds poetry and philosophy more alike at least to the extent that poetry unlike history tends to express the universal by which he means how a person of a certain type will on occasion speak or act according to the law of probability or necessity Even if the poet chances to take an historical subject he is none the less a poet for there is no reason why some events that have actually happened should not conform to the law of the probable and possible and in virtue of that quality in them he is their poet or maker In this sense the historian also may turn poet Referring to the speeches in his history Thucydides tells us that it was his habit to make the speakers say what was in my opinion demanded of them by the various occasions of course adhering as closely as possible to the general sense of what they really said

Some of the great poems notably the *Divine Comedy Paradise Lost* and *Faust* are frequently called philosophical for what appear to be other reasons either because the discourse of their characters is weighted with doctrine or because the poet himself is expressing a doctrine not in particular speeches nor by argument but in the symbolism of the poem as a whole By these criteria Lucretius *On the Nature of Things* is a philosophical work, but not a philosophical poem It is argumentative throughout not narrative at all it aims to be a literal rather than an allegorical statement of the truth Bacon s definition of allegorical poetry—as that which represents intellectual things to the senses —seems to characterize both the poetic aspect of philosophy and a distinctively philosophical type of poetry

Yet Aristotle s point, that poetry and philosophy are alike may remain valid All poetry certainly all the great narrative poems, the great epics and dramas novels and plays, deal with the abiding problems of human action and the perennial themes of human thought It is not this moral or metaphysical content however which makes poetry more philosophical than history It is the poet s treatment of such matters In the persons and events of his story he succeeds in giving the universal a concrete embodiment Precisely because these are only imaginary not real particulars they permit the abstract universal to be readily disengaged

Poets like Chaucer and Cervantes who insist that their function is to instruct as well as to delight do not assume the role of pedagogues or preachers. They teach not dogmatically but as experience does by affording the mind the materials or occasions for insight and inference. As an artistic imitation poetry may be better than the experience it represents It may improve upon experience as a teacher because born of the poet s mind it is already impregnated with ideas

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in 4 HOMER *Iliad* BK II [265 283] 12d, the number 4 is the number of the volume in the set the number 12d indicates that the passage is in section d of page 12

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lower halves of the page For example in 53 JAMES *Psychology* 116a 119b the passage begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the page For example in 7 PLATO *Symposium* 163b 164c the passage begins in the lower half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One or more of the main divisions of a work (such as PART BK CH SECT) are sometimes included in the reference line numbers in brackets are given in certain cases e g *Iliad* BK I [265 283] 12d

BIBLE REFERENCES The references are to book chapter and verse When the King James and Douay versions differ in title of books or in the numbering of chapters or verses the King James version is cited first and the Douay indicated by a (*D*) follows e g OLD TESTAMENT *Nehemiah* 7 45—(*D*) *II Esdras* 7 46

SYMBOLS The abbreviation esp calls the reader s attention to one or more especially relevant parts of a whole reference passim signifies that the topic is discussed intermittently rather than continuously in the work or passage cited

For additional information concerning the style of the references see the Explanation of Reference Style for general guidance in the use of *The Great Ideas* consult the Preface

1 The nature of poetry its distinction from other arts

7 PLATO *Ion* 142a 148a c / *Symposium* 164d 166b 167b / *Gorgias* 280d 282b / *Republic* BK I III 320d 334b BK X 427c 434c / *Laws* BK 660a 662a

9 ARISTOTLE *Ethics* BK IX CH 7 [1167b34-1168 9] 421b c / *Politics* BK VIII CH 5 [1339b40-1340b19] 545c 546a / *Poetics* 681a 699a c esp CH 1-6 681a 685a CH 9 [1451 36-b32] 686a CH 25 696d 698c

12 LUCRETIUS *Nature of Things* BK I [127 145] 2c d BK IV [1 5] 44a b

12 EPICTETUS *Discourses* BK I CH 4 109d

17 PLOTINUS *First Ennead* TR III CH I 3 10a 11a / *Fifth Ennead* TR IX CH II 250c d

18 AUGUSTINE *Confessions* BK III par 14 16d 17a

19 AQUINAS *Summa Theologica* PART I Q I A 9 REP I 8d 9c

20 AQUINAS *Summa Theologica* PART I II Q 101 A 2 REP 2 267 268a

21 DANTE *Divine Comedy* PURGATORY XXIV [49-63] 90a b PARADISE XXX [16-36] 152a

23 HOBBES *Leviathan* PART I 67b c 72a d

25 MONTAIGNE *Essays* 104d 105b 166d 167a 482d

26 SHAKESPEARE *Midsummer Night s Dream* ACT V SC I [1 27] 370d 371a

27 SHAKESPEARE *Sonnets* LV 594c d

29 CERVANTES *Don Quixote* PART II 251b-252b

30 BACON *Advancement of Learning* 32d 38c 39d 55c d

31 DESCARTES *Discourse* PART I 43b

32 MILTON *Samson Agonistes* 337a 338a

33 PASCAL *Pensées* 33 176b

36 SWIFT *Gulliver* PART IV 169a b

37 FIELDING *Tom Jones* 19a 20a 49b-50 189c

42 KANT *Judgement* 524b 532a 536d esp 532b-d

44 BOSWELL *Johnson* 254 d 308b

46 HEGEL *Philosophy of History* INTRO 153b PART I 254b d PART II 263d 265c 279b

47 GOETHE *Faust* PRELUDE [134 157] 4a b PART II [9695-9904] 235a 240b

49 DARWIN *Descent of Man* 292a

52 DOSTOEVSKY *Brothers Karamazov* BK V 115a c

54 FREUD *Beyond the Pleasure Principle* 643c

1a The theory of poetry as imitation the enjoyment of imitation

5 ARISTOPHANES *Thesmophoriazusae* [95 172] 601 602b

7 PLATO *Cratylus* 105a c / *Republic* BK II III 320c 334b BK X 427c-434c / *Timaeus* 443c / *Sophist* 561b-d / *Laws* BK II 654a c 660a 662 BK VII 726d 728b

9 ARISTOTLE *Politics* BK VIII CH 5 [1339b40-

1340b19] 545c 546a / *Rhetoric* BK I C I II [1371b4-10] 615a BK III CH I [1404 20 23] 654b / *Poet cs* 681a 699a c p c I I 4 681a 683c, CH 6 [1450b16-] 685a CH 9 [1451 36-b32] 686a c CH 25 696d 698c
12 LUCRETIUS *Nature of Things* BK V [1379-141] 79a b
12 F ICTETUS *D cou ses* BK I C I 4 109d
12 AUR LIUS *Med t t ns* BK III SECT 2 259d 260a BK XI SECT 10 303b
18 AUGUSTINE *Conf ssions* BK III pa 2 4 13 14b
19 AQUIN S *Summa Theologica* PART I Q I A 9 REP I 8d 9c PART I II Q 3 A 8 ANS 764c 765b
29 CERVANTES *D n Quixote* PART I xiiib c PART II 251d 252a
30 BA ON *Ad an ement f Learn g* 38 39d
32 M TON *Samso Agonistes* 337a 338a
33 PASC L *P sées* 32 33 176a b
35 HUME *H man U derstanding* S CT I DIV 5 45 d-453a
36 SW FT *Gull er* PART IV 169a b
37 F ELDING *Tom Jones* 121b d 123a
40 G B N *D cl ie d Fall* 94a b
42 KAN *Jud eme t* 527b 528
54 FREUD *Beyond the Pl su e Princrpl* 643c

1b The object medium and m nner of m tation in poetry and oth r arts

7 PL TO *Rep bl c* K II III 320 334b / *T maeus* 443 / *La vs* BK 654a 66?a passim K VI 726d 728b
9 A IS OTLE *P l t cs* K VIII H 5 [1339b4 1340b19] 545 546a / *P etics* 681a 699 p CH I 3 681a 682c
12 A R IU *M dit t ons* BK XI S T I 303b c
14 PLUT R *Ly u gus* 43b d
18 AUGU TIN *C fess ns* BK I P I 25 27 7a d
23 HO B *Lei atl n* ART IV 262
26 SH KE EARE *Hen y V* ROLOGUE 53 b d
27 SHAKES EAR *T m n of Ath ns* A T I SC I [15-5] 393b 394a / *S nnets* LXXX V 599
30 B CON *Ad a ement f Learn g* 38 39d
32 MILTON *S ms n Ag n t s* 337a 338
36 S FT *Gull er* T IV 169 b
37 F E D NG *Tom Jon s* 49 50c 121b d 123 189 191c
42 KA T *Judg ent* 527b 528c 557a 558b
44 BOSW L *J h* 196d 197
48 M LVILL *Moby Di k* 335a b
52 DOS O V KY *B other Kar m ov* BK X 284b-d
54 FR UD *Interpr tation f Dr am* 265c

2 Th origin nd de elopment of poetry the materials of myth and l gend

4 HOMER *Il d* K [1-7] 3 K II [484 493] 14d 15 / *Ody ey* BK [I 0] 183a
5 AESC YLU *Prometh us B u d* [442 461] 44c d
5 ARISTOPHANES *Knights* [503-546] 476b d / *Peace* [734-8 8] 534c 535c / *Frogs* [871-894] 574b c
6 HERODOTU *H story* BK I 5b
7 PLATO *Ion* 143a / *Republic* BK III 324c 328b
8 ARISTOTLE *M taphysics* BK I CH 2 [982b11-19] 500d 501a
9 ARISTOTLE *Poetics* CH 3-5 682a 684a CH 6 [145 b6-8] 684d 685a CH 13 [1452b30-1453a2] 687c 688a CH 18 [1456 16-32] 691c d
12 LUCRETIUS *Nature of Thin* BK V [1379-1411] 79a b
12 AURELIUS *Meditations* BK XI SECT 6 302 303a
13 VIRGIL *Eclogues* IV [I 3] 14a VI 19a 21a / *Aene d* K I [I II] 103a [740-747] 123b K VII [37 44] 237a [641-646] 254a
14 PLUTAR H *Solon* 76a / *Pericles* 128d 129a
18 AUGUSTINE *City of God* BI XVIII CH 13 14 478d-479d
21 DANT *Divine C medy* PARADISE XXXIII [46-75] 156 157a
23 HOBBES *Lei th n* PART V 262
24 RAB L S *G rgantua d Pantagr el* K III 190d 191a
25 MONTAIGN *Es ay* 362a 363b 482d
30 BACON *Advancement of Learning* 32d 8d 39a
32 M LTON *Parad Lost* K IX [I 47] 247a 248a / *Sams n Agonistes* 337a 338a
37 FIE DING *T m Jone* 152a 155b 357a d
40 G BBON *De l e and F ll* 23d 24a c 94a b 158d 159a 476d-477a 502d 544 545c 6 7b d
41 G B ON *D l ne and F ll* 40b 41a 225a 293c 325d 328a c esp 32 d 522b 528a c
46 H GEL *Pl l phy of Hi tory* INTRO 1 3b P RT I 229b 230 239c 240a 254b d PA T I 263d 265c
48 M LV LLE *Moby D ck* xib xxa
49 DARV N *Des ent f Man* 569c 571b
52 DOS O V KY *B thers Ka ama ov* BK V 127b 128a
54 F UD *Interpretat n f D m* 246b c / *Gener l I t duction* 483b c 509a 513d p s m / *Gro p P y h l gy* 692 693a / *N v I trodu tory Lectures* 816a b

3 The in p r t on c r genius of the poet the infl enc of the po t c trad tion

4 HOM R *Il ad* K I [7] 3a K II [484 493] 14d 15 / *Ody ey* BK I [10] 183a
5 ARISTOPHANE *A ha n s* [665-675] 462d 463a / *Kn ght* [58 -594] 477b / *Cl uds* [314-340] 491 -492a [56 -574] 495 [59 -6] 496a / *P a* [734-8 8] 534 535c / *B d* [37 1409] 559b-c / *T sm ph r s* [39-57] 600d 601 [95 17] 601 602b / *Plutus* [44 97] 630d 631b

(3 *The inspiration or genius of the poet the infl ence of the poetic tradition*)

7 PLATO *Phaedrus* 124a / *Ion* 142a 148a c esp 144b 145c / *Symposium* 160c 161a 166b 167b / *Apology* 202c d / *Laws* BK IV 684b c
9 ARI TOTLE *Ethics* BK IX CH 7 [1167^b34 1168 9] 421b c / *Rhetoric* BK III CH 1 [1403^b 15 4 4 39] 653b d 654c CH 2 [1405^a7–8] 655b / *Poet cs* CH 4 [1448^b24 1449^a7] 682d 683a CH 13 [1453 30 35] 688a CH 17 [1455 21 39] 690c CH 22 [1459 5 7] 694d
12 LUCRETIUS *Nature of Things* BK I [127 145] 2c d [921 950] 12b c BK IV [1 25] 44a b
21 DANTE *Di ine Comedy* HELL II [7 10] 2c IV [67–102] 6a b XXVI [19–24] 38a XXXII [1 12] 47c PURGATORY I [1 12] 53a XXI [76] XXII [129] 85d 87d XXIV [49–63] 90a b XX I [88 148] 93d 94c XXIX [37 42] 98a PARAD E I [1 37] 106a b II [1 17] 107d X [28 48] 120c d XVIII [82–87] 134c XXII [106 123] 140d XXIII [55 69] 141d 142a
22 CHAUCER *T oilu and Cre ida* BK II STANZA 1 3 21b 22a BK V STANZA 256–257 153b 154a
24 RABELAIS *Gargantua and Pantagru l* BK I 2d 3a c
25 MONTAIGNE *Essays* 52d 53a 104d 105b 166d 167a 195d 197a 309c 362a 363b 455c d 482d 512b d
26 S AK SPEARE *Midsummer N ght s D eam* ACT V SC I [1 27] 370d 371a / *Henry V* PROLOGUE 532b d
27 SH KESPEARE *Timon of Athens* ACT I SC I [19–25] 393d / *Sonnets* C CVIII 601c 60 d
29 CERVANTES *Don Q xote* PART I XIa XIIId P RT II 251d 252a 340b
30 BACON *Advancement of Learning* 55c d
31 DESCARTES *D co se* PART I 43b
32 MILTON *Lyc das* 27b 32a esp [1 22] 27b 28a [64–69] 29 [186– 93] 31b 32a / *Parad se Lost* BK I [1– 6] 93b 94a BK I I [1 55] 135b 136b BK VII [1 39] 217a 218a BK IX [1 47] 247a 248a
36 ST N *T str m Shandy* 302a b
37 FI LDING *Tom J es* 49a 50c 152 155b 189a 191c 246a 247a 273a 274c
40 GIBBON *Decl ne a d Fall* 24 185b 345b c 476d 477a
41 GIBBON *Decl n and F ll* 527d 528a 573a 574a
42 KANT *Judgem nt* 525c 532a esp 526a 527b 528c 530 542b 543c
44 BO W LL *Joh on* 455a
47 GOETH *Fau st* D ICATION PRELUDE 1a 6a esp D DICATION 1a b PRELUDE [34 157] 4 b PA T II [5573–5605] 137b 138a
49 D RWIN *D c t f M n* 292a
53 J ES *Psychology* 686b 688a 863a
54 FREUD *I terpretat on of D eams* 181a b 239c 240a 246b 248c 383d / *Gener l In t oduct n* 483c 600d 601b / *Grou p P ychol gy* 670a b 692c 693a / *Civ li t on a d Its D scontent* 796c

4 The major kinds of poetry their compar tive excellence

4a Epic and dramatic poetry

7 PL TO *Republic* BK II 322a BK III 328 331c
9 ARISTOTLE *Poetics* CH 1 3 681a-682c CH 4 [1448^b 4 1449^a] 682d 683a CH 5 [1449^b9–19] 683d 684a CH 23 24 695a 696d CH 26 698c 699a c
29 CERVANTES *Don Quixote* PART I 185b
30 BACON *Advancement of Learn ng* 39a d
43 F DERALIST NUMBER 47 154a
52 DOSTOEVSKY *Brothers Karama ov* BK V 127b 128a
54 FREUD *Group Psychology* 692c d

4b Tragedy and comedy

5 ARISTOPHANES *Frogs* [1482 1499] 581d 58
7 PLATO *Symposium* 173c / *Gorgias* 281d 282a / *Republic* BK III 329b BK X 431b / *Philebus* 629a 630c / *Laws* BK II 655d BK VII 727d 728b
9 ARISTOTLE *Ethics* BK IV CH 8 375a d passim / *Po tics* 681a 699a c esp CH 5–6 683c 68 a CH 12 687b c
12 EPICTETUS *D scourses* BK I CH 4 109d CH 24 129c d CH 28 133d 134d
12 AURELIUS *Meditations* BK XI SC T 6 303a
14 PLUTARCH *Solon* 76a / *Pericles* 128d 129a
21 DANTE *Di ine Comedy* H LL XVI [124 136] 23d PARADISE XXX [19–36] 152a
22 CH UCER *Troilus and Cressid* BK V STANZA 256–257 153b 154a / *Monk s P ologue* [13 9 9– 988] 433b [13 997 14 004] 434a
23 HOBBES *Leviathan* PART I 69c
29 CERVANTES *Don Quixote* PART II 237b c
32 MILTON *Samson Agonistes* 33 a 338a / *A eopagitica* 385a
37 FI LD NG *Tom Jones* 73a 75a 154d 155a 273d 357a d
42 KANT *Judgement* 537a 539d
44 BOSWELL *Johnson* 308b d
46 HEGEL *Philosophy of History* PART II 263a b
48 MEL ILLE *Moby Dick* 54b 55a 84b-85a 107a b
53 JA E *Psychology* 373a b
54 FREUD *I terpretation of Dreams* 246c 248c / *General Intr d ction* 581d 582b

5 Poetry in relation to knowledge

6 T UCYDIDES *Peloponnesian War* BK I 354b c
7 PL TO *Lys s* 19d 20 / *Pha drus* 138c 140d / *I n* 142a 148a c / *Rep blic* BK III 333b d BK X 427c 434c / *Laws* BK IV 684b c
9 AR STOTLE *Rh t r c* BK I C 1 11 [1371^b4 1] 615a / *Poetics* C 1 4 [1448^b4 23] 682c d CH 9 [45 36–^{b}32] 686a c CH 24 [146 19–25] 696b c CH 25 [1460^b6– 2] 696d 697b
18 AUGUSTI E *C nfess ons* BK I par 0–22 6a c par 2 7 7a d BK I I par II 16

19 AQUINAS *Summa Theolog ca* PART I Q I A 9 REP I 8d 9c
20 AQUINAS *Summa Tl eologica* PART I II Q o A 2 REP 2 267a 268a
21 DANTE *D v e Comedy* HELL, I [61 136] 1d 2c PURGATORY XXII [64–93] 87a-c PARADISE I [1 37] 106 b XVI [100–142] 133a c
23 HO ES *Leviath* PART I 67b-c 72a d
25 MONTAIGNE *Essays* 258c 259a 362a 363b
30 BACON *Advancement of Learn g* 32d 38d 39b 55d
31 DESCARTES *D scou se* PART I 43b
33 PAS AL *Pensees* 33 176b
37 F LDING *Tom Jones* 296b d 298a
40 GIBBON *Decl e and Fall* 345c
41 GIB ON *Decli e and Fall* 300a b
42 KANT *Judgement* 526 527b 528c 530c 532b-d
51 TOLSTOY *Wa and Peace* BK X 431a
53 JAMES *Psychol gy* 687 863a
54 F EUD *Civili ation a d Its D s o tents* 796c

5a The aim of poetry to instruct as well as to delight the preten ions or decept ons of the poet as teacher

5 ARISTOPHAN S *Acharn a s* [497–508] 460d 461a [628 675] 462b-463a / *Knights* [503 511] 476b / *Clouds* [575–594] 495c d / *Frogs* 564a 582a esp [o8 1098] 576b 577c [14 7 1533] 581a 582a
7 PLATO *Ph edrus* 140c d / *Apology* 202 d / *G rgi s* 281d 282a / *Republ c* BK II–III 320c 339 BK X 427 -434c / *Timaeus* 455b / *Laws* K II 653a 663b BK VII 726d 728b
9 AR TOTL *P litics* BK V I CH 5 544 546a CH 7 [341b33 1342b 8] 547 548a c
12 LUCR TI *N ture f Th gs* BK I [127 45] 2c d [92 -95] 12b- BK IV [1 25] 44a b BK V [10–1 3] 62
12 AU ELIUS *M ditat o s* BK I SECT 7 253b-d BK XI ECT 6 302 303a
14 P UTARCH *Lycurgu* 33d 34a 43b d / *S lo* 76a / *Peri les* 121d 122b
18 AUGUST NE *City of G d* BK IV CH 27 202d 203c I XVI I CH 14 479c d
22 C I U ER *Prologu to Mel b s* 400b-401a / *L En o* 550a b
24 RA LAIS *Garg ntua and Pantagruel* BK III 168a 169d
25 MONT GNE *Essays* 62b-c 245d
29 C RVANTES *Don Qu xote* PART I XIa XVId 13b 16c 184a 187c 189d 191d PART I 322b c 427a-429d
32 MILTON *Par d s Lost* BK IX [1–47] 247a 248a / *Sam on Agonistes* 337a 338a / *A pag tica* 385a
35 HUM E *H ma Understand ng* S CT I DIV 5 45 d-453a
37 F LDING *Tom Jo s* 1a 2a 35a d 49 50 73 75a
39 SM TH *Wealth f Nat on* BK V 347 d
40 G B ON *Declin d Fall* 346 494b-495
41 GIBBON *Decl ne and Fall* 40d-41a
42 KANT *Judgement* 532a d 534c 539d
44 BOSWELL *Johnson* 116b 158a b 284b 308b d
46 HEGEL *Philosophy of H st ry* PART II 265c
47 GOETHE *Faust* PR LUDE 2a 6a
52 DOSTOEVSKY *B others Karama* BK V 127b 128a

5b Poetry contrasted with h story and philosophy the dispraise and defense of the poet

5 ARISTO HANES *Frogs* [1482 1499] 581d 582a
6 H RODOTUS *Hi tory* BK II 72a 73b K IV 127b
6 THUCYDIDES *Peloponnes an War* BK I 353d 354c
7 PL TO *Lysis* 19d 20a / *Protagoras* 57a c / *Phaedrus* 122d 123a 140a d / *Gorgias* 280d 282b / *Republic* BK II III 320c 333b BK VIII 415b-c BK X 427c-434c / *Laws* BK IV 684b c
9 ARISTOTLE *Poetics* CH 9 [1451 36–b32] 686a c CH 23 695a c CH 25 696d 698c
14 PLUT RCH *Theseus* 1a b / *Solon* 6a / *Pericles* 140d
17 PLOTINUS *First Ennead* TR III CH 1–3 10 11a
18 AUGUST NE *City f God* K II CH 14 156c 157 BK IV CH 26–27 202a 203 BK VI I CH 13 273b-d
19 AQUIN S *Summa Theolog ca* PART I Q I A 9 REP I 8d 9c
20 AQUINAS *Summa Th olog a* PART I II Q I A 2 REP 2 267a 268a
23 HOBBE *Leviath n* PART I 67b c
25 MONTA GNE *Essays* 62b c 194c 201b passim 258d 259a
26 SH KE PEARE *Mid ummer N ght s Dr m* ACT V C I [2 221] 373a b / *Ist H nry IV* CT II SC I [0–135] 451b
28 H RVEY *On An mal Generat n* 473b
29 CERVANTES *D n Qu xote* PART I XIa XIIId PART II 212a 215b esp 213b c 251a 252b
30 B CON *Advancement of Learning* 32d 38d 39b 55d
32 MILTON *Samson Ag nistes* 337a 338a / *A pag t ca* 385a
33 PA CAL *Pens es* II 173b-174a 34–35 177a 38 39 177b
35 HUM E *Human U derstand ng* SECT I DIV 5 452d-453a
37 FIELDING *Tom Jones* 19a 20 49b 50c
38 ROUSSEAU *Social C ntract* BK 390
40 GI ON *D cline a d Fall* 88a d 186c d 345b-346b 398b 471 d 545c 627b d
44 BOSWELL *Johnso* 120c 307c
46 HEGEL *Ph l ophy of History* INTRO 153a b ART I 229b 230a PART II 259b
47 GO TH *Faust* PART II [7426–7433] 181b-182 [10 89–191] 248b
51 TO TOY *W ar a d P ce* BK X 431
52 DOSTO VSKY *B ther Ka am z* BK V 115a-c BK X 312d 313b
53 JAM S *Psy h l ogy* 686b 689a

6 Poetry and emotion

6a The expression of emotion in poetry

OLD TESTAMENT *Exodus* 15:1-21 / *II Samuel* 1:17-27—(D) *II Kings* 1:17-27 / *Psalms* passim / *Lamentations*

APOCRYPHA *Judith* 16—(D) OT *Judith* 16 / *Song of Three Children* 28-68—(D) OT *Daniel* 3:51-90

NEW TESTAMENT *Luke* 1:42-55,67-79

7 PLATO *Ion* 146d-147a / *Republic*, BK III, 325b-326b; BK X, 432a-434c / *Philebus* 628d-630c / *Laws*, BK II, 654b-d

9 ARISTOTLE *Politics*, BK VIII, CH 5, 544-546a; CH 7 [1341b33-1342b18] 547-548a,c / *Rhetoric*, BK I, CH II [1371b4-11] 615a; BK II, CH 7 659a-660a; CH 16 [1417a37-b7] 671c-d / *Poetics*, CH 15 [1454b7-14] 689c; CH 17 [1455a29-39] 690c

13 VIRGIL *Aeneid*, BK I [440-493] 115a-116b

21 DANTE *Divine Comedy*, HELL, XXXIV [1-36] 51b-c; PURGATORY, XXIV [49-63] 90a-b

25 MONTAIGNE *Essays* 104d-105b; 399d-401a; 410a-c

27 SHAKESPEARE *Sonnets*, LXXVI 597d-598a; LXXVIII-LXXIX 598b; LXXXII-LXXXV 598d-599b

29 CERVANTES *Don Quixote*, PART I, 184a-185b

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32 MILTON *L'Allegro* 17b-21a / *Il Penseroso* 21a-25a

33 PASCAL *Pensées*, II 173b-174a

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4 HOMER *Odyssey*, BK I [325-359] 186b-c; BK VII [71-113] 222d-223a; [48-547] 227a-d; BK XI [1-3] 255a

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7 PLATO *Ion* 145a-b / *Republic*, BK III, 325b-326b; BK X, 431b-434c / *Philebus* 628d-630c

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29 CERVANTES *Don Quixote*, PART I, xiiic

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9 ARISTOTLE *Poetics* 681a-699a,c esp CH 6 684a-685a; CH 12 687b-c

32 MILTON *Samson Agonistes* 337a-338a

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9 ARISTOTLE *Poetics*, CH 2 681d-682a; CH 6 [1449b36-1450b10] 684b-685a; CH 13 [1452b30-1453a30] 687c-688a; CH 15 689a-d

12 EPICTETUS *Discourses*, BK I, CH 4 129c-d; CH 28 133b-134d

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37 FIELDING *Tom Jones* 49a-50; 152a-155b; 204b-d; 205c

44 BOSWELL *Johnson* 157d-158b

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40 Gibbon *Decline and Fall* 345c; 471c-d; 494d-495a
41 Gibbon *Decline and Fall* 693d [n 83]
44 Boswell *Johnson* 282c-d; 446c-447a
46 Hegel *Philosophy of Right* additions 12 118a-c / *Philosophy of History* intro 153a-c
47 Goethe *Faust* part ii [7426-7433] 181b-182a
48 Melville *Moby Dick* 151b-152a
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9 Aristotle *Poetics* ch 6 [1450a33-35] 684d; ch 10-11 686d-687b; c 14 [1453b22-1454a8] 688c-689; ch 16 689d-690b
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5 Aristophanes *Knights* [1373-1383] 486d-487a / *Clouds* [331-340] 492a; [1351-1379] 504d-505b / *Peace* [734-818] 534c-535c / *Birds* [1372-1409] 559b-c / *Frogs* [758-1533] 573a-582a,c / *Thesmophoriazusae* [95-175] 601c-602b
7 Plato *Protagoras* 52d-57a / *Republic* bk iii 328b-333b; bk x 430c
9 Aristotle *Ethics* bk iv ch 8 [1128a18-33] 375b-c / *Politics* bk vii ch 7 [1342a32-b8] 548a-c / *Rhetoric* bk iii ch 1-12 653b-667b passim / *Poetics* ch 1 [1447a14-b23] 681c; ch 1-6 [1450b13-15] 685a; ch 19 [1456b8]-19] 692a-b; ch 22 694a-695a; ch 24 [1460a32-b4] 696c-d; ch 25 [1461a9-b18] 697c-698b
18 Augustine *Confessions* bk iii par 14 16d-17a; bk xi par 35-37 97c-98b / *City of God* bk xi ch 18 331d-332a / *Christian Doctrine* bk ii ch 6 638a-d; bk iv ch 17-26 686c-696a passim
21 Dante *Divine Comedy* hell, xxviii [1-42] 41b-c; xxxii [1-12] 47c; purgatory, xxiv [49-63] 90a-b; xxvi [88-148] 93d-94c; xxxi [133-145] 102b; paradise, i [1-37] 106a-b; x [28-48] 120c-d; xxx [19-36] 152a; xxxiii 156b-157d
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23 Hobbes *Leviathan* part i 67b
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26 Shakespeare *1st Henry IV* act iii sc i [121-135] 451b-c
27 Shakespeare *Hamlet* act ii sc ii [85-123] 41c-d; [454-466] 45a / *Sonnets* xxi 589b-c; lxxvi 597d-598a; lxxxii 598d; cxxx 606a-b
29 Cervantes *Don Quixote* part i xia-xiiid 1b-c; 13b-16c; 185a-b; part ii 251a-252a
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36 Sterne *Tristram Shandy* 287b-289b
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40 Gibbon *Decline and Fall* 494d-495a,c
41 Gibbon *Decline and Fall* 300b; 327a-c; 573a
42 Kant *Judgement* 513d-514b; 524b
44 Boswell *Johnson* 59d; 61d; 167d; 170d; passim; 180c; 202b; 284b; 307c; 381d-382c; 454a-b; 455b
47 Goethe *Faust* prelude [146-149] 4b
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53 James *Psychology* 381a; 400b; 687a-688a
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7 Plato *Protagoras* 52d-57c / *Ion* 142a-148a / *Apology* 202c-d / *Republic* bk ii 321b-d
9 Aristotle *Poetics* ch 25 [1461a9-b25] 697c-698c
14 Plutarch *Coriolanus* 189b-c
18 Augustine *Christian Doctrine* bk ii ch 6 638a-d; ch 9-10 640; 641a; ch 12 641-642b; ch 16 644b-645d; bk iii ch 5 659d-660a; ch 24-37 666d-674d
19 Aquinas *Summa Theologica* part i q 1 a 9-10 8d-10c
20 Aquinas *Summa Theologica* part i-ii q 101 a 2 rep 2 267a-268a
21 Dante *Divine Comedy* hell, ix [61-63] 13b; purgatory, viii [19-21] 64c; xxxiii [64-78] 104d-105a
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9 ARISTOTLE *Polit cs* BK VII C I 7 [1336 30-33] 541b [1336b12 35] 541c d BK VIII CH 3 542d 543d CH 5 7 544c 548a c
12 AURELIUS *M ditat ns* BK I SECT 7 253b d
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18 AUGU TINE *C nf sion* BK I pa 20-22 6a-c par 25 27 7a d BK III pa 2 4 13c 14b BK X par 49-50 83c 84b / *C ty of God* X I CI 31 33 147d 149a K I CH 8 14 153d 157c BK IV CH 26-27 202a 203 / *Chri t an D ct ine* BK II CH 6 638a d
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42 KANT *Judgement* 504a b 521b 523c 586d 587a
44 BOSWELL *Johnson* 116b 158a b 259b c esp 259b [n 2] 308b d
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51 TOLSTOY *W a and P a e* BK VIII 311a 313a 324b 325d
54 FREUD *General Introduct n* 582a b / *W ar and D ath* 762c

9b The issue concerning the censorship of poetry

5 ARISTO HANES *A harn an* [366-384] 459 d [497-508] 460d-461a
6 HERODOTUS *H st ry* BK V 172d 173b BK VI 189c
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14 PLUTARCH *Lycu gu* 43b d / *Solon* 76a
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41 G BBON *D l n and F ll* 300a b
43 M LL *Liberty* 274b-293b pass m
44 BOSWELL *J hn n* 259b-c

CROSS REFERENCES

For The comparison of poetry with history philosophy and science *see* HISTORY 1 KNOWLEDGE 4c PHILOSOPHY 1d SCIENCE 2b TRUTH 4b

The consideration of the fine arts in general *see* ART 7a and for standards of critical judgment with respect to the beauty or excellence of works of fine art *see* ART 7b BEAUTY 2 5

Another discussion of the theory of art as imitation and for related doctrines *see* ART 3 FORM 1d(1)

The elements of inspiration emotion and tradition in the formation of poetry *see* ART 8 MEMORY AND IMAGINATION 3d

Other aspects of the distinction between tragedy and comedy *see* HAPPINESS 4b

Matters related to the theory of emotional purgation *see* ART 8 DESIRE 4d

The place of poetics among the sciences *see* PHILOSOPHY 2c

The discussion of poetic truth and probability *see* MEMORY AND IMAGINATION 7b TRUTH 4b

Other considerations of the problem of style *see* LANGUAGE 9 RHETORIC 2-2b

Matters bearing on the interpretation of poetry *see* RHETORIC d

The role of poetry and other fine arts in education *see* ART 10a EDUCATION 4d VIRTUE AND VICE 4d(4)

Other discussions of the problem of censorship or of the political regulation of artistic expression *see* ART 10b EDUCATION 8c EMOTION 5e LIBERTY 2a

ADDITIONAL READINGS

Listed below are wo ks not included in *G at Books of th W stern Wo ld* but relevant to the idea and top s w th which this chapter de ls These orks a e divided into two group

I Works by authors represented in this collection

II Works by authors not ep esented in th s collection

For the date place and oth r facts conce ni the publication of the works c ted con ult the Bibliog aphy of Additional Re dings which follows the la t chapter of *The Great Ideas*

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SHELLEY *A Defense of Poetry*
HAZLITT *Lectures on the English Poets*
—— *My First Acquaintance with Poets*
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HUGO *Préface de Cromwell*
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T CARLYLE *On Heroes, Hero-Worship and the Heroic in History* LECT III
EMERSON "The Poet" in *Essays* I
HUNT *An Essay in Answer to the Question What Is Poetry?*
KIERKEGAARD *Either/Or*
—— *The Point of View*
POE *The Poetic Principle*
TAINE *Essais de critique et d'histoire*
NIETZSCHE *The Birth of Tragedy*
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MEREDITH *An Essay on Comedy and the Uses of the Comic Spirit*
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BERGSON *Laughter*
CLAUDEL *Poetic Art*
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SHAW *Dramatic Opinions and Essays*
H JAMES *The Art of the Novel*
BABBITT *The New Laokoon*
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Chapter 70 PRINCIPLE

INTRODUCTION

OF the three ways in which principles are considered in the tradition of the great books the most familiar sense of the word is the one in which we speak of moral principles principles of action or political principles The connotation of the word in this usage seems to be twofold We think of principles as rules of conduct and we think of them as standards by which to measure and judge human acts or political events Either conception attributes a certain generality to principles Just as rules apply to an indefinite number of particular cases so any principle we appeal to in order to decide a practical problem or to weigh the merits of an action undertaken can be applied again and again in other circumstances

In addition to this characteristic of generality principles seem to have the quality of *underlying* or being the *source of* other things In jurisprudence the search for principles consists in the attempt to discover those few most fundamental precepts from which the more detailed rules of law can be derived The constitution of a state provides the principles which underlie its particular laws and sets the standards by which their legality is to be measured Governments are judged by the principles they attempt to apply as well as by their success in putting these principles into practice To say of a government that its acts are *unprincipled* is not to condemn the particular acts as wrong but to accuse the government of having no uniform policy to serve as a foundation for its acts

This aspect of the meaning of principle—as the source from which a set of consequences follows—seems to be more characteristic of the idea of principle than the aspect of generality According to its Latin derivation and the equivalent root in Greek principle means a beginning or a foundation Sometimes it means that which comes first absolutely in the sense of being before everythin else sometimes it means that which comes first only relatively taking precedence over some things but having others prior to itself Since priority may be either absolute or relative—first without qualification or first only in a certain respect—the traditional phrase first principle does not have the redundancy of first first or beginning beginning

If there are absolutely first beginnings, to which nothing else can be prior they can legitimately be called first principles to distinguish them from principles which come first only in a certain respect Only if there are first principles can regression to infinity be avoided in the search for origins The propositions which lie at the foundation of a science may for example constitute its principles but they may also be derived in turn from some prior science Only the principles of a science which is prior to or independent of all others can be truly first principles

THE FOREGOING example brings us to the other meaning of principle that is popularly recognized It is the sense in which men speak of principles in relation to conclusions or of principles as the foundations of a science

The priority which belongs to principles in the domain of thought need not be temporal Principles may or may not be first in the order of learning But if they are not first in the temporal order they must be first logically as premises are logically prior to a conclusion or as in Euclid s *Elements* his principles—his definitions postulates and axioms—are logically prior to all the theorems he demonstrates by means of them

It may be asked whether among propositions related as premises and conclusions, the logical priority of one proposition to another

is sufficient to make the prior proposition a principle Can a proposition be a principle if even though it is used as a premise in reasoning it lacks generality? For example is the particular proposition—that this bottle contains poison—a principle underlying the practical conclusion that its contents should not be swallowed?

Aristotle answers affirmatively In the order of practical thinking he holds we deliberate neither about the end to be sought nor about the particular facts on which a choice of the means depends The end cannot be a subject of deliberation he writes but only the means nor indeed can the particular facts be a subject of it as whether this is bread or has been baked as it should for these are matters of perception The perceived particulars thus function as principles along with the most general of all practical propositions namely what the end should be. Calling the faculty which apprehends first principles intuitive reason Aristotle says that the intuitive reason involved in practical reasonings grasps the last and variable fact *i e* the minor premise For these variable facts are the starting points for the apprehension of the end since the universals are reached from the particulars of these therefore we must have perception and this perception is intuitive reason

Perception at least in the form of *sense*-percept on seems to be only one of the two ways in which we apprehend the particular facts which are principles in practical reasoning Like Aristotle Aquinas uses the judgment that *this is bread or iron* as an example of facts received through the senses which are principles accepted in the inquiry of counsel But the moral quality inherent in particular acts does not seem to be perceptible by the senses alone and such particular moral judgments are also involved in moral reasoning Aristotle suggests that habit (*i e* the moral habits or virtues) are the immediate source of such judgments which can be called perceptions of the particular even though they are not simply sense-perceptions

Of first principles Aristotle explains we see some by induction some by perc ption some by a certain habituation By induction we see the general truths by sense percept on the sensible particulars and by habituation the moral particulars Hence Aristotle insists that anyone who is to listen intelligently to lectures about what is noble and just and generally about the subjects of political science must have been brought up in good habits For the fact is the starting point and if this is sufficiently plain to him he will not at the start need the reason as well for the man who has been well brought up has or can easily get the starting points

The word principle is used by Kant in a much more restricted sense He reserves the status of principle to the general propositions which serve as the major premises in reasoning In both the theoretic and the practical sciences principles express reason s understanding of universal and necessary relationships

Kant differs from Aristotle in other respects He differentiates between ordinary general propositions which merely serve as major premi es in reasoning and the propositions he classifies as synthetic judgements *a priori* He regards the former as principles only in a relative sense and treats the latter alone as principles absolutely He also distinguishes between those principles of the *understanding* which he thinks are constitutive of experience and those principles of the *reason* which should be used in what he calls a regulative not a constitutive manner They determine the direction and goals of thought beyond experience. But such differences concerning the nature and kinds of principles do not affect the commonly accepted meaning of principle as that from which in the temporal order of learning knowledge develops or that upon which in the logical order knowledge rests

THE THIRD AND relativ ly unfamiliar sense in which princ ples are discussed in the great books does not refer to the sources of man s moral decisions political acts or scientific conclusions The discussion in question refers to reality apart from man Just as men try to discover the elements of matter or the causes of mot on so they try to discover the prin ples of existence and of change The issues wh h arise from this conc rn with th princ ples of real ty are discussed in such hapt rs BEING CAUSE CHANGE FORM NATURE and MATTER

If the word principle always connotes a beginning every special sense of principle should involve some kind of priority As we have already observed principles may be either prior in time or prior logically But the principles of the universe or the principles of change are not usually thought to be prior in either of these ways For them Aristotle specifies another kind of priority—priority in nature—to explain the primacy of those principles which constitute the nature of a thing In his view for example matter and form are the principles of a physical substance Since a substance composite of matter and form cannot exist until its matter and its form coexist matter and form are not prior to the substance they compose Their priority to substance consists only in the fact that that which has the nature of a composite substance *results* from the union of matter and form as its natural components Because the substance is the *natural resultant* matter and form can properly be called its *natural principles*

This way of considering principles at once suggests a close relationship among principles elements and causes and also indicates the connection between the present chapter and the chapters on CAUSE and ELEMENT The ultimate parts into which a whole can be divided may be its principles as well as its elements The form or matter of a substance may be in Aristotle s theory not only one of its principles but also a cause—a formal or a material cause Among the great authors Aristotle and Aquinas alone seem to dwell upon the relationship of these three terms They give instances in which the same thing is principle element and cause as well as instances in which a principle is neither a cause nor an element *e g* privation In the sphere of human conduct an end is both a principle and a final cause but not an element The last end is the highest final cause and the first principle—first in intention though last in attainment

THE TRADITIONAL issues concerning this idea differ according to the general context in which the question of principles is raised The main controversy for example with regard to principles in the order of reality is over their number and order

Aristotle argues against an infinite number of principles as incompatible with the very notion of principle itself In his analysis of change or motion he tries to prove that no more than three principles are necessary and no less will do These are as the chapter on CHANGE explains matter form and privation. Considering the principles of the universe as a whole Plotinus also enumerates three and tries to prove that none can be added or subtracted. But whereas Aristotle treats the three principles of change as coordinate Plotinus places the cosmic principles in the absolute order of first, second and third

We need not go seeking any other Principles writes Plotinus This—the One and the Good—is our First next to it follows the Intellectual Principle the Primal Thinker and upon this follows Soul Such is the order in nature The intellectual realm allows no more than these and no fewer Those who hold to fewer Principles must hold the identity of either Intellectual Principle and Soul or of Intellectual Principle and The First To increase the Primals by making the Supreme Mind engender the Reason Principle and this again engender in the Soul a distinct power to act as mediator between Soul and the Supreme Mind this is to deny intellection to the Soul, which would no longer derive its Reason from the Intellectual Principle but from an intermediate Therefore we must affirm no more than these three Primals

In the sense in which Plotinus conceives the three primals they are not only principles in the order of reality but are themselves the ultimate grades or modes of reality Similarly for Plato soul is not only the principle of life and thought in the universe but it also has its own existence in the realm of being For Aristotle in contrast the principles of change do not have existence in and of themselves Matter form and privation are not substances but aspects of substance They are present in every changing substance and in every change but they are only the principles *of* mutable being they are not mutable beings in themselves

Lucretius states two principles as the basic laws of nature The first is that nothing comes into being out of nothing the second that nothing is ever completely reduced to nothing

ness The word principle is obviously not being used in the same sense here as when it designates The One for Plotinus soul for Plato matter for Aristotle or the atoms which Lucretius calls the first beginnings Here it does not refer to an entity or even to an aspect of some real being but rather to a law—the statement of a universal and necessary condition which governs all that is or happens It is in this sense that the proposition traditionally called the law of contradiction —that the same thing cannot both be and not be in the same respect at the same time—is said by Aristotle to be the first principle of being as well as of thought

The conception of the law of contradiction and the related laws of identity and excluded middle as principles of thought raises problems about logical principles in general—whether they are axioms or postulates whether they are merely rules of reasoning and demonstration or are themselves premises from which conclusions can be deduced If for example the law of contradiction is *only* a rule of thought which forbids the mind to affirm and deny the same proposition then it is not a principle of knowledge in the sense in which the definitions and axioms of geometry function as premises in the demonstration of theorems No conclusion can be drawn from it concerning the nature of things But if in addition to being a rule of thought it is a metaphysical axiom which states the most fundamental fact about existence then like the axioms in geometry it may be the source of conclusions in metaphysics

On this second point Locke seems to differ sharply from Aristotle and Aquinas He denies that the laws of identity and contradiction are fruitful princ ples of knowledge These magnified maxims he writes are not the principles and foundations of all our other knowledge Nor have they been he adds the foundations whereon any science hath been built There is I know a great deal of talk propagated from scholastic men of sciences and the maxims on which they are built but it has been my ill luck never to meet with any such sc ences much less any one built upon these two maxims what is is and t is impossible for the same thing to be and not to be

WE SHALL PRESENTLY consider the issue concerning axioms or postulates—whether the principles of the sciences are self evident truths or are only provisional assumptions Those who are willing to admit the existence of axioms do not all agree however that such truths refer to reality Hume for example limits the content of axioms to knowledge of the relations between our own ideas They are not truths about real existence or matters of fact

Locke also grants self evidence only to perceptions of the agreement or disagreement between ideas Concerning the real existence of all other beings except ourselves and God we have he writes not so much a demonstrative much less a self evident knowledge and therefore concerning these there are no maxims But Locke does think that our demonstrative knowledge of God s existence depends upon an intuitive knowledge of our own existence and in addition to knowing our own existence directly or without proof he also thinks we have through our senses an equally direct knowledge of the existence of other things Such intuitive and sensitive knowledge of particular existences is like the truth of axioms immediate—that is something known directly or without proof without any appeal to prior propositions Hence Locke is not denying that we know some immediate truths about reality but only that such truths consist exclusively of propositions about particular existences Since axioms or what Locke calls maxims are always general propositions the self evident truths which they express do not apply to reality

William James uses the word intuitive — in a different sense from Locke—to characterize propositions that state the necessary *and eternal relat ons wh ch the mind finds* between certain of its ideal conception Intuitive propositions are for him therefore what maxims are for Locke and like Locke James also denies that such axioms of reason hold for reality Only *hypo heti ally* he says can we affirm intuitive truths of real things—by suppos ng namely that real things exist wh ch co respond exactly w th the ideal ubject of tł e intuitiv proposit ons The intuitive propos tions of Locke leave us s gards outer real ty none the b tt r fo the r pos ession We

still have to go to our senses to find what the reality is

The vindication of the intuitionist position James continues is thus a barren victory The eternal verities which the very structure of our mind lays hold of do not necessarily themselves lay hold on extramental being nor have they as Kant pretended later a legislating character for all possible experience They are primarily interesting only as subjective facts They stand waiting in the mind forming a beautiful ideal network and the most we can say is that we *hope* to discover outer realities over which the network may be flung so that ideal and real may coincide

The opposite view seems to be taken by Plato Aristotle Aquinas Bacon Descartes Spinoza and Kant Though they are far from being in complete agreement concerning the principles of knowledge the propositions which they call axiomatic self evident intuitive or *a priori* synthetic judgments are not restricted by them to the mind s perception of the relations between *its own* ideas There are self evident or immediate truths in physics and metaphysics as well as in mathematics and logic Whether these are inductions from experience or innate possessions of the mind whether they are intuitive apprehensions of intelligible being or *a priori* judgments having a transcendental origin these propositions are held to describe the world of experience or the nature and existence of things outside the human mind

There seem to be two degrees of skepticism with regard to principles in the order of knowledge Complete skepticism would consist in denying principles in every sense That would be the same as denying any beginning or bases for even the opinions which men hold No one seems to go that far

The issue with respect to the foundations of knowledge or opinion is therefore not between those who affirm and those who deny principles but between different views of what the starting points are It is sometimes said for example that sensations are the principles or beginnings of all human learning This view is shared both by those who think that all our ideas or concepts are abstracted from the materials provided by the senses and by those who account for all the other contents of the mind —its memories and imaginations its complex formations—in terms of the simple impressions originally received by the senses

Concepts as distinct from sense perceptions, are also sometimes regarded as principles of knowledge by those who think that concepts originate by abstraction from sensory materials as well as by those who think that ideas are primary principles *i e* having no origin in any prior apprehensions On either view ideas or concepts function as principles insofar as they are the simples from which the more complex acts of the mind develop such as the acts of judgment and reasoning Just as on the level of language words are the principles of all significant speech out of which sentences and paragraphs are formed just as in the logical order terms are said to be the principles of propositions and syllogisms so concepts are the principles of judgments and reasonings. The definitions of Euclid for example state the notions of *point* line triangle etc which underlie his theorems and demonstrations

One common characteristic of either sensations or concepts as principles of knowledge seems to be *simplicity* Nothing more elementary out of which they can be formed is prior to them Another characteristic is that they are principles of knowledge or opinion without being themselves acts of knowledge or opinion. This point is made by all who hold that only propositions—whether statements of opinion or of knowledge—can be true or false

The terms which express the simple apprehensions of the mind—its sensations or concepts—cannot be true or false because unlike propositions which are composed of terms, they do not assert anything If sensations and concepts cannot be true or false in the sense in which propositions or judgments are then they lack the *distinctive property* of knowledge or opinion In contrast propositions or judgments —which are supposed to be principles whether axioms or assumptions—can be treated as themselves expressions of knowledge or opinion n merely as its starting points or sources

The two degrees of skepticism previously mentioned apply only to those principles o

knowledge which are themselves capable of being regarded as knowledge or opinion and hence as either true or false

We have already considered the skepticism of those who admitting that the truth of some propositions can be immediately recognized by the mind nevertheless deny that such self evident truths describe reality This may or may not be accompanied by a further deprecia tion of axioms on the ground that they are merely analytical propositions and hence tri fling uninstructive or tautological

The chapter on JUDGMENT considers the is sue which revolves around the derogatory use of such words as tautology or truism to designate self-evident truths Though the in vidious connotation of the word truism does not make the truth to which this epithet is ap plied any less true the dignity of a truth does seem to be affected by the refusal to regard it as a statement of reality Furthermore a certain degree of skepticism results from such refusal Hume exemplifies this He holds that self evident truths are possible only in mathematics which deals not with matters of fact but with the relations between our own ideas In con sequence he denies to the study of nature the certitude or demonstrative character which he finds in mathematical science Since physics is concerned with real existences no axioms or self evident principles are available to it and so according to Hume it cannot demonstrate its conclusions but must advance them as probabilities.

A more thorough going skepticism seems to consist in holding that there are absolutely no matters at all about which men have axiomatic knowledge This appears to be the pos tion of Montaigne No truths are self evident None commands the universal assent of mankind none belongs to the nature of the mind so that all men must agree to it Montaigne almost holds it to be axiomatic that there are no axioms for if there were he says there would be some one thing to be found in the world that would be believed by men with an univer sal consent but this that there is no one propo sition that is not debated and controverted amongst us or that may not be makes it very manifest that our natural judgment does not very clearly comprehend what it embraces

If it is objected that in the absence of such principles there is no starting point or founda tion for science Montaigne seems willing to accept the consequence He does not flinch from an infinite regression of reasons No rea on he writes can be established but upon the foundation of another reason and so run back to all infinity To those who say that there is no disputing with persons who deny principles he replies that men can have no principles if not revealed to them by the Divinity of all the rest the beginning the middle and the end are nothing but dream and vapor

If however for practical purposes a begin ning must be made somewhere Montaigne sug gests that it can be done by taking things for granted and then getting others to grant our presuppositions It is very easy he writes upon granted foundations to build whatever we please By this way we find our reason well grounded and discourse at a venture for our masters prepossess and gain beforehand as much room in our belief as is necessary for them towards concluding afterwards what they please as geom ters do by their postulates the con ent and approbation we allow them giving them power to draw us to the right and left and to whirl us about at their own pleasure

IF THE ONLY principles upon which reasoning can be based or from which conclusions can be drawn are assumptions postulates or hypoth eses rather than axioms then everything is a matter of opinion and probability nothing can have the certitude of knowledge As indicated in the chapters on KNOWLEDGE and OPINION one theory of that distinction makes knowl edge an act of the mind independent of our wishes or will and treats opinion as a judgment voluntarily accepted or rejected Accordingly assumptions or postulates are perfectly repre sentative of opinion and axioms express the very essence of knowledg To assume or pos tulat anything is to take it for granted— voluntarily! A postulate neither comp ls as sent nor does it ever excl id th poss bil ty of taking the opposite for granted Whe e men make postulates there dispute is poss ble But to assert something as an ax om is to command assent on the ground that its opposite can be

immediately recognized as impossible No proposition can be regarded as an axiom if its acceptance or rejection is in any way a matter of choice

For Aristotle the area in which men can dispute with some reason on both sides belongs to what he calls dialectic whereas what he calls science is the area from which dispute is excluded by demonstrations which rest on self evident truths One is the area of probability and opinion the other of certainty and knowledge Contrary assumptions are the starting point of dialectical argument whereas science begins with axioms These may be the first principles which Aristotle and Bacon call common notions because they are common to diverse sciences or they may be the axioms peculiar to a single subject matter

The word dialectic is used by Plato in a quite different sense It names the highest science Whereas the mathematical sciences start from hypotheses which require further support dialectic—in the conception of Plato—rises to the first principles of all knowledge In the hierarchical ordering of the sciences Plato s dialectic Aristotle s metaphysics and Bacon s *philosophia prima* seem to occupy respectively the same primary position and to perform the same function in virtue of being the discipline which contemplates or considers the absolutely first or most universal principles For Bacon as for Aquinas the only higher science is sacred theology whose principles are articles of supernatural faith not axioms of reason

These matters are more fully discussed in the chapters on DIALECTIC METAPHYSICS and THEOLOGY questions concerning different kinds of principles or the principles of different sciences are considered in HYPOTHESIS and LOGIC The chapter on INDUCTION furthermore discusses the inductive origin of axioms as well as the disagreement between Bacon and Aristotle on the point of whether the highest axioms or first principles are immediately intuited from the particulars of experience or are reached only through intermediate stages of generalization

Since axioms are indemonstrable they cannot be derived by reasoning as conclusions from any truths prior to themselves Their indemonstrability is regarded by Aristotle and Pascal as a virtue rather than a defect for if they were demonstrable they could not be the principles or starting points of demonstration If there were no axioms then nothing could be demonstrated because everything in turn would require proof in an endless regression

To the ancient counterparts of the skeptical Montaigne Aristotle replies that unless the law of contradiction is an indisputable axiom any form of reasoning even probable reasoning from assumptions is impossible The principle which underlies all disputation cannot itself be disputed To those who with skeptical intent, insist upon having everything demonstrated before they will accept it Aristotle offers an indirect defense of the law of contradiction by asking the questioner to try denying that self evident principle without reducing himself to absurdity

Those who acknowledge the existence of axioms generally agree that they are indemonstrable truths but some like Descartes and Kant do not agree that they are inductions from experience The alternatives seem to be that axioms are innate possessions of the intellect or that they are transcendental *a priori* principles of pure reason independent of experience Yet Locke who denies innate ideas and principles or anything prior to experience does not treat what he calls self evident maxims as inductions from experience They are rather direct perceptions of agreement or disagreement among the ideas we have acquired through experience

Aquinas who no less than Locke denies innate ideas and insists upon sense experience as the source of all human knowledge refers to the assent we give first principles as a *natural habit* of the mind—the intellectual virtue he calls understanding equivalent to what Aristotle calls intuitive reason As the chapter on HABIT indicates axioms are called natural truths not in the sense of being innate instinctive or congenital but only in the sense that if the human reason functions naturally or normally it will come to recognize these truths Again like Locke Aquinas seems to be saying that the truth of axioms is perceived by the human understanding as soon as their terms are known but he does not concur

with Locke in thinking that therefore such truths hold only for relations between our own ideas

THE THEORY OF the possession of principles by natural habit has for Aquinas more than a verbal connection with the theory of natural law Of the various meanings of the phrase natural law which are distinguished in the chapter on LAW we are here concerned with what both Kant and Aquinas conceive as the moral law whose precepts are the fundamental principles of human conduct Both also speak of the precepts of the natural law or the moral law as the first principles of man s practical reason

For Aquinas these principles are primary in the order of practical truth and the moral sciences as metaphysical first principles are primary in the order of speculative truth and the theoretic sciences The precepts of the natural law he writes are to the practical reason what the first principles of demonstration are to the speculative reason because both are self-evident principles As the proposition that *the same thing cannot be affirmed and denied at the same time* is the first principle of the speculative reason so the first precept of law that *good is to be done and evil is to be avoided* is the first principle of the practical reason.

For Kant the principles of the pure practical reason which legislate *a priori* for the realm of freedom play an analogous role to the principles of the pure speculative reason which legislate *a priori* for the realm of nature or experience It is this parallelism between the two sets of principles which Kant seems to have in mind when he conceives a *metaphysic of nature* and a *metaphysic of morals* as twin disciplines founded on the speculative and the practical employment of the transcendental principles of pure reason

The same fundamental issues which we have considered in connection with the axioms of theoretic knowledge occur here in connection with the first principles of moral knowledge Aquinas and Kant disagree for example about the way in which we come into possession of these principles For Kant the principles of mortality like the principles of nature belong to the transcendental structure of pure reason itself For Aquinas as already suggested the precepts of the natural law are known in the same way as the axioms of the speculative reason As the truth of the principle of contradiction is known when we understand the meaning of is and not so the truth of the first command of natural law— Seek the good —is known when we understand the meaning of seek and good We hold such truths by the natural habit of our minds which in the case of the natural law is given the special name of *synderesis*

Just as we find a certain skepticism with regard to the principle of contradiction and other axioms so we find doubts about the existence of natural law or about indisputable and universally acceptable principles of morality Referring to those who think that there are some laws first perpetual and immutable which they call natural that are imprinted in mankind by the condition of their own proper being Montaigne declares that the only sign by which they can argue or infer some laws to be natural is the universality of approbation and he adds Let them produce me but one of this condition

The consequences of skepticism are here the same as before Without first principles moral science either fails entirely or is reduced to systems of belief based upon one set of assumptions or another In either case moral judgments express not knowledge but opinion As John Stuart Mill observes the utilitarians must despite all other differences agree with Kant that if there is to be a science of ethics mortality must be deduced from principles and ultimately from one first principle for if there be several there should be a determinate order of precedence among them

What Mill says concerning the self evidence of the first principle of morality—which he formulates as a statement of the ultimate end of human conduct—closely resembles what Aristotle says about the self-evidence of the law of contradiction Questions of ultimate ends are not amenable to direct proof Mill writes 'To be incapable of proof by reasoning is common to all first principle to the first premises of our knowledge as well as to those of our conduct

OUTLINE OF TOPICS

REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in 4 HOMER: *Iliad*, BK II [265-283] 12d, the number 4 is the number of the volume in the set; the number 12d indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters a and b refer to the upper and lower halves of the page. For example, in 53 JAMES: *Psychology*, 116a-119b, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters a and b refer to the upper and lower halves of the left-hand side of the page, the letters c and d to the upper and lower halves of the right-hand side of the page. For example, in 7 PLATO: *Symposium*, 163b-164c, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; e.g., *Iliad*, BK II [265-283] 12d.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay version is indicated by a (D), e.g., OLD TESTAMENT: *Nehemiah*, 7:45—(D) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. Principles in the order of reality

1a. The differentiation of principle, element, and cause

7 PLATO: *Timaeus*, 455d

8 ARISTOTLE: *Physics*, BK I, CH 1 [184a10-21] 259a / *Generation and Corruption*, BK II, CH [illegible] [illegible] 4[illegible]b / *Metaphysics*, BK I, CH 6 [illegible]; BK III, CH 3 [illegible]; BK V, CH 1-3 533a-534d; CH [illegible] 5[illegible]b; BK VII, CH 17 [illegible] 566d; CH [illegible]; BK VIII, CH 4 [illegible]; BK XII, CH 1 598a-c; CH 4-5 599d-601a esp CH 4 [illegible] 601b

9 ARISTOTLE: *Soul*, [illegible] / [illegible]

19 AQUINAS: *Summa Theologica*, PART I, Q 33, A 1 REP 1 180d-[illegible]; Q [illegible], A [illegible] ANS 363b-[illegible]

31 DESCARTES: *Objections and Replies*, 158a

45 LAVOISIER: *Elements of Chemistry*, PART I, 3d-4a

1b. The being, number and kinds of principles in the order of reality

7 PLATO: *Phaedo*, 24[illegible] / *Republic*, BK III, 383[illegible]d, BK VI, 383d-388a / *Timaeus*, 450c-[illegible] / *Sophist*, 564d-[illegible] / *Philebus*, 6[illegible]d-6[illegible]d

8 ARISTOTLE: *Physics*, BK I 259a-268d; BK III, CH 4 [203a3-16] 281b-c; BK IV, CH [illegible] [illegible] 2[illegible]b-c; BK VI, CH 5 318a-319c / *Heavens*, BK I, CH [illegible] 3[illegible]d-3[illegible]d; BK III, CH 3-[illegible] [illegible] / *Metaphysics*, BK I, CH 3-10 501c-511d; BK II, CH [illegible] 512b-513b; BK III, CH 1 [illegible]; CH 2 [illegible]-CH 6 [illegible] 5[illegible]a-522a; BK V, CH 3-4 534c-[illegible]; BK VII-XIV 550b-626d / *Soul*, BK I, CH [illegible] [illegible] 634a-635a

10 GALEN: *Natural Faculties*, BK I, CH 3 168-169a

12 LUCRETIUS: *Nature of Things*, BK I [146-634] 2d-9b [illegible]

17 PLOTINUS: *Second Ennead*, TR IX, CH 1 65d-66a / *Fourth Ennead*, TR VII, CH 9 198b-d / *Fifth Ennead*, TR I, CH [illegible] 209d-21[illegible]; CH 11 21[illegible]; TR IV 226d-227b / *Sixth Ennead*, TR I-III 252a-297b; TR VIII, CH 8 345d-346[illegible]; TR IX 353d-360d passim

19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 3 12c-14a; Q 4, A 2 [illegible]; A 6, ANS [illegible]; Q 14 [illegible] 152a-153c; Q 33 [illegible] 180d-[illegible]; [illegible]; Q 44 [illegible] 227d; Q 45 [illegible] 238a-241d; Q 3 254d-255a; [illegible]; A 3 266d-268a; Q [illegible], A 1, ANS 3[illegible]b-3[illegible]c; Q [illegible] 40[illegible]c

(1 *Principles in the order of reality* 1b *The being, number and kinds of principles in the order of reality*)

84 A 2 ANS and REP 3 442b-443c A 4 REP 1 444d 446b Q 115 A 2 587c 588c
31 DESCARTES *Discourse* PART VI 61d 62c
31 SPINOZA *Ethics* PART II PROP 10 SCHOL 376d 377a
34 NEWTON *Principles* 1b 2a LAW I 1 14a b BK III GENERAL SCHOL 371b-372a / *Optics* BK III 541b 542a
42 KANT *Pure Reason* 66d 93c esp 68a 74b 85d 88a 108a 112d esp 110a d / *Judgement* 467d-470b 565b-d 566d 567a 575b 578a
45 LAVOISIER *Elements of Chemistry* PREF 3b-4a
45 FOURIER *Theory of Heat* 169a b
53 JAMES *Psychology* 882a 884b

1c The metaphysical significance of the principles of thought

7 PLATO *Euthydemus* 72d 73b / *Republic* BK IV 350d 351b
8 ARISTOTLE *Interpretation* CH 13 [^{b}28 23 26] 34d 35c / *Metaphysics* BK II CH [995^{b}6 10] 514a CH 2 [996^{b} 6–997 15] 515b d BK IV CH 3 524b 525a BK XI CH 1 [1059 23 26] 587a
20 AQUINAS *Summa Theologica* PART II Q 94 A 2 ANS 221d 223a
31 DESCARTES *Discourse* PART IV 52a / *Objections and Replies* D III 130b AXIOM V 131d 132a
31 SPINOZA *Ethics* PART II PROP 10 SCHOL 376d 377 PROP 37 40 386b 388b PROP 44 COROL 2 390a
35 LOCKE *Human Understanding* BK IV CH VII SECT 10–11 339b 342d
42 KANT *Pure Reason* 15 16c 59c 107b / *Pref Metaphysical Elements of Ethics* 367d 368a / *Judgement* 543d 544a 560 562a d 600d 601d 603b c
46 HEGEL *Philosophy of Right* PREF 6c
53 JAMES *Psychology* 302a b 671a 672a 852 862 866a 873a 874a 881b 886a esp 881b-882 884b 886 890
54 FREUD *New Introductory Lectures* 877b c

2 The kinds of principles in the order of knowledge

2a The origin of knowledge in simple apprehensions

2a(1) Sensations or ideas as principles

7 PLATO *Symposium* 167 b / *Phaedo* 228a 230c / *Republic* BK 392b 393b / *Theaetetus* 517b 536b / *Seventh Letter* 810d
8 ARISTOTLE *Posterior Analytics* BK I CH 18 111b c / *Metaphysics* BK CH 1 [980 28 ^{b}24] 499a
12 LUCRETIUS *Nature of Things* BK I [4 2 425] 6b [693 70] 9c BK I [434 436] 20 BK IV [353–521] 48d 51a esp [469–521] 50b 51a
19 AQUINAS *Summa Theologica* PART I Q 12 A 12 ANS 60d 61c Q 17 A 1 ANS 100d 101d Q 18 A 2 ANS 105c 106b Q 84 A 6 447c-449a A 8 ANS and REP 1 450b 451b PART I II Q 13 A 6 ANS 680c–681a
23 HOBBES *Leviathan* PART I 49a
28 GILBERT *Loadstone* BK V 105c
28 HARVEY *On Animal Generation* 332a 335c esp 334c d
35 LOCKE *Human Understanding* BK I CH I SECT 15 98d 99a BK II CH I SECT 1–8 121a 123a esp SECT 2 121b-c SECT 23 25 127b d esp SECT 24 127b c CH II SECT 2 128a b CH VII, SECT 10 133a b CH XIII SECT 1–6 148d 149d esp SECT 2 149a CH XIV SECT 2 155b c SECT 27 160d 161a SECT 30–31 161c 162a CH XV SECT 2 3 162c d CH XVII SECT 22 CH XVIII SECT 1 173d 174a CH XVIII SECT 6 174c d CH XXII SECT 9 202c 203a BK III CH I SECT 5 252b c CH IV SECT 12 14 262b 263a
35 BERKELEY *Human Knowledge* INTRO 405 412a c passim esp SECT 4 405c d SECT 17 409d 410a
35 HUME *Human Understanding* SECT II 455b 457b SECT VII DIV 49 471c d
42 KANT *Pure Reason* 14a 22a c 66d 72c esp 69c 72c 101b 107b
53 JAMES *Psychology* 452a 459b esp 453b 454a 455a-457a 480a
54 FREUD *Ego and Id* 701d

2a(2) Definitions as principles

7 PLATO *Phaedrus* 134b d 140a b / *Meno* 174a 179b / *Theaetetus* 544c 549d / *Seventh Letter* 809c 810d
8 ARISTOTLE *Posterior Analytics* 97a 137a c passim esp BK I CH 3 [72^{b}18 24] 99b c CH 10 [76^{b}35 77 4] 105c d CH 22 [84 6–^{b}2] 114d 115b CH 23 [84^{b}19–85 3] 115c 116a BK II CH 3 10 123c 128d / *Topics* BK VII CH 3 [153^{a}6–11] 208a b BK VIII CH 3 [158 31 159^{a}2] 214d 215c / *Metaphysics* BK III CH 2 [996^{b} 18 21] 515b BK IV CH 7 [1012 18 24] 53 b CH 8 [1012^{b}5–8] 532c BK VII CH 1 [1036 1–8] 559b c BK XI I CH 4 [1078^{b}17 3] 610b-c / *Soul* BK I CH 1 [402^{b}15 4 3^{a}2] 631d 632a
19 AQUINAS *Summa Theologica* PART I Q 2 A 2 REP 2 11d 12c Q 17 A 3 REP 1 2 102d 103 Q 58 A 5 303c 304c Q 85 A 6 458d 459c
20 AQUINAS *Summa Theologica* PART I II Q 94 A 2 ANS 221d 223a
23 HOBBES *Leviathan* PART I 56b d 58d 59c 65d PART IV 269b c
31 DESCARTES *Objections and Replies* 128c
33 PASCAL *Geometrical Demonstration* 430b-431b
35 LOCKE *Human Understanding* BK III CH IX SECT 15 16 288d 289c CH XI SECT 15 17 303b 304a BK IV CH III SECT 20 319b

3 First principles or axioms in philosophy science dialectic

3a Principles and demonstration

3a(1) The indemonstrability of axioms natural habits of the mind

8 ARISTOTLE *Prior Analytics* BK II CH 16 [64b28 36] 85c / *Posterior Analytics* BK I CH 3 99b 100a / *Metaphysics* BK III CH 2 [996b 26-997a 4] 515b-d BK IV CH 4 [1005b35-1006 12] 525a b BK XI CH 5 [1061b34 1062 5] 590a b / *Soul* BK I CH 3 [407a22 30] 636d 637a
9 ARISTOTLE *Ethics* BK VI CH 3 388b-c CH 6 389d CH 11 [1143a25 b13] 392d 393a
19 AQUINAS *Summa Theologica* PART I Q 14 A 1 REP 2 75d 76c Q 16 A 6 REP 1 98b-d Q 17 A 3 REP 2 102d 103c Q 79 A 12 42 c 426b PART I II Q 1 A 4 REP 2 612a 613a A 5 ANS 613a 614a
20 AQUINAS *Summa Theologica* PART I II Q 53 A 1 ANS 19d 21a Q 57 A 2 ANS and REP 2 36a 37b Q 94 A 1 221a d
30 BACON *Advancement of Learning* 56c 59c
33 PASCAL *Geometrical Demonstration* 440b
35 LOCKE *Human Understanding* BK I CH I SECT 10-11 97c 98a CH III SECT 23 119b-120a BK IV CH X SECT 10 354c 357b passim esp SECT 1 357a b
42 KANT *Pure Reason* 66d 72c esp 67c 69 211c 218d / *Judgement* 542d 543a
43 FEDERALIST NUMBER 31 103c 104a
43 MILL *Utilitarianism* 445d-447a 461c 465a b
53 JAMES *Psychology* 851a 890a esp 851a 852a 879b 882a 889a b

3a(2) The indirect defense of axioms

8 ARISTOTLE *Metaphysics* BK IV CH 4-8 525a 532d BK XI CH 5-6 590a 592b

3a(3) The dependence of demonstration on axioms the critical application of the principles of identity and contradiction

7 PLATO *Euthydemus* 72d 73b / *Cratylus* 112a / *Republic* BK IV 350d 351b
8 ARISTOTLE *Posterior Analytics* BK I CH 1-3 97a 100a CH 7 [75 38 b7] 103c CH 11 105d 106b CH 19-23 111c 116a CH 32 [88 36-b4] 120d / *Topics* BK VIII CH 3 [158 31 b4] 214d 215a / *Metaphysics* BK II C 2 [996b 6-997a 14] 515b-d BK IV CH 3 [1005 18 27] 524b CH 4 [10 5b35 1006 12] 525a b CH 6 [1011 3 14] 530d BK V C 15 [1015b6-9] 535d 536 BK XI CH 6 [1063b7 12] 591d
9 ARISTOTLE *Ethics* BK VI CH 3 388b c CH 6 389d CH 11 [1143 25 b13] 392d 393a / *Rhetoric* BK I CH 2 [1356b26-28] 596b
11 EUCLID *Elements* BK I COMMON NOTIONS 2
19 AQUINAS *Summa Theologica* PART I Q 14 A 7 81d 82b Q 17 A 3 REP 1 2 102d 103c Q 36 A 3 REP 4 194c 195d Q 84 A 3 REP 3 443d-444d Q 85 A 6 458d-459c PART I-II, Q 1 A 4 REP 2 612a 613a
20 AQUINAS *Summa Theologica* PART I-II Q 90, A REP 3 206b 207a Q 94 A 2 ANS 221d-223a
28 HARVEY *On Animal Generation* 333d 334d esp 334a
30 BACON *Advancement of Learning* 56c 59d
31 DESCARTES *Discourse* PART II 46c-4 a / *Meditations* III 82b-d V 95b-96a / *Objections and Replies* 123a b 125a b 224b d
31 SPINOZA *Ethics* PART II PROP 3 47 386b-391a esp PROP 40 SCHOL 1 2 387b-388b
35 LOCKE *Human Understanding* BK IV CH II SECT 1 309d SECT 7-8 310d 311a CH VII 337a 344d esp SECT 10-11 339b-342d
42 KANT *Pure Reason* 17d 18d 64d-65c 68a 69c 174b d 211c 218d
43 FEDERALIST NUMBER 31 103c 104a
44 BOSWELL *Johnson* 82b
46 HEGEL *Philosophy of Right* ADDITIONS 3 116a

3b Principles and induction axioms as intuitive inductions from experience stages of inductive generalization

8 ARISTOTLE *Prior Analytics* BK II CH 23 90a-c / *Posterior Analytics* BK I CH 18 111b-c BK II, CH 2 [90a24 30] 123b c CH 7 [92 34 b1] 126b CH 19 136a 137a c
9 ARISTOTLE *Ethics* BK VI C 3 388b-c CH 6 389d CH 11 [1143a25 b13] 392d 393a
28 HARVEY *On Animal Generation* 333d 334d esp 334c d
30 BACON *Advancement of Learning* 56c 59c 96d 97a / *Novum Organum* 105a 195d esp PREF 105a 106d BK I APH 11 26 107d 108d, APH 36-38 109b-c APH 63 113d 114a APH 66 114d 115c APH 69-70 116a 117a APH 94 126a b APH 103 106 127d 128c BK II APH 1 10 137a 140d APH 15 16 149a b APH 20-22 150d 153c APH 52 194c 195d
31 DESCARTES *Objections and Replies* 123a b 167c d
35 LOCKE *Human Understanding* BK I CH III SECT 25 120d
35 HUME *Human Understanding* SECT I DIV 2 451b c DIV 9 454d SECT IV DIV 26 460b-c
42 KANT *Pure Reason* 66d 72 217a-c
43 MILL *Utilitarianism* 446a 475b d [fn 1]
46 HEGEL *Philosophy of History* PART I 361a b

3c Axioms in relation to postulates hypotheses or assumptions

3c(1) The distinction between first principles in general or common notions and the principles of a particular subject matter or science

7 PLATO *Republic* BK VI 383d 388a esp 386d 388a

8 ARISTOTLE *Posterior A alytics* BK I CH 10 104d 105d CH 11 [77ᵃ26-35] 106b CH 32 120 121b / *Topics* BK I CH 2 [101 37 ᵇ4] 144a / *Heavens* BK III CH 7 [306 1 18] 397b c / *M aphysics* BK IV CH 3 [1005ᵇ15 18] 524d / *Soul* BK I CH 1 [402 7 23] 631b
9 ARISTOTLE *Rheto ic* BK I CH 2 [1358 3 33] 597d 598b
30 B ON *Advancement of Learning* 40a-48d esp 40 -41b 43a-c, 44c 45a
35 BERKELEY *Human Knowledge* SECT 118 436b c
43 MILL *Utilitar an sm* 445b c

3c(2) The d fference between axioms and as s mptions hypotheses and pr nc ples as a b s s for the distinction between knowledge nd op nion or sc ence and dialectic

7 PL TO *Republ c* BK VI VII 383d 398 esp BK VII 396d 398c
8 A IS OTLE *Poster or Analytics* K I CH 97d 99 CH 1 [77ᵃ22 35] 106b / *Topi s* BK VIII CH 3 [58 31 ᵇ4] 214d 215a / *Phy cs* BK VIII CH 1 [52ᵃ23 ᵇ7] 336a b / *M taphysics* K IV CH [1004ᵇ18 27] 523d
9 AR STOTLE *Eth* BK CH 3 [1094ᵇ11 28] 339d 340a / *Rh toric* BK I CH 2 [1358 3 33] 597d 598b
19 AQU NAS *Summa Theologica* PART I Q 12 A 7 ANS and REP 56a 57b A 13 RE 3 61c 62b Q 47 A I R 3 256 257b Q 8 A ANS 432d 433c Q 83 A I AN 436d 438a
20 AQUINAS *Summa Theologic* P R I Q 5 A 3 14b 15 Q 67 A 3 AN 83b 84d P RT II I Q I 4 NS 382 383b PART I Q 9 3 E 2 765b 766b
23 H BES *Lei tha* P RT 65b d
25 M TAI NE *Es ay* 260 261a
30 BA ON *Adv cem t of Le i g* 56c 59b
31 DESCART *Rules* II 2 3b
34 HUYG NS *Light* P F 551b 552a
35 LOCKE *H m n U dersta d ng* K IV H XVII S T 371d 372b S CT 5 7 378d 379
42 K NT *P re Re s n* 217 218 240b 243c / *Judg ment* 600d 604b

3c(3) The d tinction and ord of the sciences acco di g to the ch r ct r of their p nciple

7 PLAT *Rep ibl c* BK I 386d 388a BK VII 391b 398
8 AR STOTL *M t phy ics* BK VI CH [1025ᵇ1-18] 547b d K X CH 3 [6 ᵃ19-ᵇ4] 589 CH 4 [6 7 28] 589d 590a c 7 [63ᵇ36-1064 9] 592b BK XIII CH 2 [1077ᵇ1]-CH 3 [1078 3] 609a d
9 A ISTOTL *Ethic* BK I CH 7 [98ᵃ20-ᵇ8] 343c 344 / *Rhetoric* K I CH 2 [1358 3 33] 597d 598b
19 AQUIN *Summa Th ol g ca* PART I Q I A 2 ANS and REP I 4a c A 5 5c 6a A 6 R P I 2 6b 7a
23 HOBBES *Le i than* PART I 71c d 72a d PART II 163a b
30 BACON *Advancement f Learn ng* 39d-41b
31 DESCART S *Rules* II 2a 3b / *Discou* PART I 43d-44a / *Meditati ns* I 76c / *Object s and Repl s* 128d 129a / *Geometry* BK II 304a b
35 HUM *Human Under tand ng* SECT IV DIV 20-21 458a c D V 30 462a
42 KANT *Pu e Reason* 15c 16 17d 19a 64d 65c 68a 69 215d 217 / *Fu d Prin Meta phys c f Morals* 253a d / *Practical Reaso* 351b 352c / *I t Metaphysic of M al* 388a c / *J dgement* 578a b
43 F D ALIST NUM BER 31 103c 104a
43 MILL *Ut l t sm* 445b c
53 J ME *Psychology* XIIIb XIVa 884b 886a
54 FREUD *N cissism* 400d-401a / *Instincts* 412 b

4 First p nciples n the pr ct c l order the p nciples of action or mor lity the principles of the pr ct cal re on

7 PLATO *Gorgias* 262 263c 280c d
9 A TOTLE *Eth* BK I H 3 339d 340b pa im CH 7 [1098 25 ᵇ8] 343d 344 BK VI CH 5 389a c passim CH I [1143ᵃ25 ᵇ13] 392d 393a BK VII CH 8 [151 11 9] 401d 402a
12 E I TETUS *D scou s* K I CH 2 127 128c BK CH 2 177 178d H 10 185d 187a
12 AURELIUS *M d t t ns* K VIII CT I 285 b
18 AUGU TIN *C ty f God* K VIII H 8 270a d K X X 507a 530 c passim
20 AQU NAS *Summ Theolog ca* PART II Q 9 A 3 ANS 209d 210c
23 HOBBES *Levi than* PART I 86 96b PART II 140b 153 154a
31 SPINOZA *Ethi s* PART IV PROP 18 SCHOL 429a d
35 L CK *Huma Underst di g* K I CH II II 103d I 1a c esp C I II S CT 3 104b d SECT - 7 111a 112
38 ROU SEAU *I equality* 330d 331b 343d 345c
42 KANT *P e Reas* 190 d 234c 240b esp 235a b 238 239a / *F d Prin M t physic of M r ls* 253 287d esp 253d 254d 256 257d 258d 259a 260a 261d 262a 265 266b-268a 268d [fn] 269c 270d 271 273d 280b 280d 281 282b 283d 286a 287d / *Practical Re son* 291a 361d esp 291b 293b 293 d [fn 3] 298 300 304d 307d 310b 311d 318 321b 325a 328a 329a 331 338 355d / *P f Met phy ic l Elen s f Eth* 365b 366d 367 369 373b / *Int Metaphysic f M als* 383a 394a esp 386d

(4 *First principles in the practical order: the principles of action or morality; the principles of the practical reason*)

388a 392b / *Science of Right* 397a-402a / *Judgement* 463a-467a 478a 479d 584d 587a 588b [fn 2] 594c 596c

43 FEDERALIST: NUMBER 31 103c 104a

43 MILL: *Utilitarianism* 445a-476a,c passim, esp 445a-447b

49 DARWIN: *Descent of Man* 316a 317a 592d

53 JAMES: *Psychology* 886b 888a

54 FREUD: *General Introduction* 592d 593a / *Beyond the Pleasure Principle* 639a 640c 662c 663b esp 663a / *Civilization and Its Discontents* 772a b

4a Ends as principles and last ends as first principles: right appetite as a principle in the practical order

7 PLATO: *Gorgias* 262a 263c 280c d / *Republic*, BK VI VII 383d 398c esp BK VII 397 398c

8 ARISTOTLE: *Metaphysics*, BK CH [993^{b}4 7] 500d BK II CH 2 [994 8 10] 512b [994^{b}9 16] 512d 513a BK III CH [996 21 ^{b}13] 514d 515a BK V CH I [0 3^{a}20 24] 533b BK VII CH 7 [1032 28–^{b}29] 555b d BK IX CH 8 [50^{a} 3 ^{b}6] 575d 576b BK XII CH 10 [1075 12 24] 605d 606a

9 ARISTOTLE: *Parts of Animals*, BK I CH I [639^{b} 10–640 12] 161d 162b / *Motion of Animals*, CH 6 [700^{b}4] CH 7 [701 39] 235d 236d / *Ethics*, BK I CH I 4 339a 340d P CH 4 [95 30 ^{b}12] 340c d CH 7 [1098 35–^{b}8] 343d 344a CH 12 [1101^{b}34 110 4] 347b BK 9 [1109^{b}20 23] 355c BK II CH 3 [II ^{b} 2 1113^{a}2] 358c 359a BK VI CH 2 387d 388b CH 5 389a c passim CH 8 [142 12 31] 391b-c CH 9 [1142^{b} 7 35] 391d 392b C I I [1143^{a}25 ^{b}13] 392d 393a CH 12 [1144 31 37] 394a CH 13 [1144^{b}30- 45 6] 394c d BK VI CH 3 [1147^{a}25 ^{b}6] 397c d CH 8 [15 15 19] 402 BK X CH 6-8 430d-434a / *Politics*, BK VI CH 13 [1331^{b}24 37] 536b c / *Rhetoric*, BK I CH 6-7 602d 607d

12 EPICTETUS: *Discourses*, BK III CH 13 4 188b 190a

18 AUGUSTINE: *City of God*, BK X CH I 298b d / *Christian Doctrine*, BK I C I 3 4 625b c C I 35 634c d

19 AQUINAS: *Summa Theologica*, PART I Q 18 A 3 ANS 106b 107c Q 19 A 2 REP 2 109c 110b A 5 ANS 112d 113c Q 22 A I REP 3 127d 128d Q 23 A 5 ANS 147d 149a Q 6 A 2 ANS 311a d Q 82 A I 2 431d 433c Q 113 A I REP 2 576a d PART I I Q I 609a 615c Q 8 A 2 ANS 656 d Q 9 A 3 ANS 659c 660a Q II A 3 667d 668d Q 12 AA 2 4 670b 672a Q 13 A 3 ANS 674c 675a A 6 R P I 676c 677b Q 14 2 678b c A 6 ANS 680c 681a Q 15 A 3 682 683b Q 16 A 3 685b 686a Q 34 AA 3 4 770c 772b

20 AQUINAS: *Summa Theologica*, PART I II Q 56, A 2 REP 3 30c 31a A 3 ANS 31a 32b A 4 REP 4 32b 33c Q 57 A 4 ANS 38a 39a A 5 ANS and REP 3 39a-40a Q 58 A 3 REP 2 43b-44a A 4 ANS and REP I 44a d A 5 44d 45c Q 65 A I ANS and REP 3 4 70b 72 A 2 ANS and REP 3 72a d A 3 ANS and REP I 72d 73d Q 90 A 2 REP 3 206b 207a Q 91 3 ANS 209d 210c PART II II Q 26 A I s and REP I 510c 511a Q 27 A 6 ANS 524c 525c Q 181 A 2 617d 618c

23 HOBBES: *Leviathan*, PART I 76c d PART IV 272c

30 BACON: *Advancement of Learning* 69d 70a

31 SPINOZA: *Ethics*, PART I APPENDIX 369b-372d PART IV PREF 422b d-424a DEF 7 424b

33 PASCAL: *Pensées* 98 190b / *Geometrical Demonstration* 440b

35 LOCKE: *Human Understanding*, BK II CH XXI SECT 52–53 191d 192b SECT 62 194c d

42 KANT: *Pure Reason* 234c 240b esp 23 a b, 236d 237a 238c 239a / *Fund Prin Metaphysic of Morals* 253d 254d 256a b 257c d 260a c 266a 267d 271d 279d esp 274d 275b 282b 283d 286c 287d / *Practical Reason* 318c 321b esp 320c 321b 327d 329a 338c 355d / *Pref Metaphysical Elements of Ethics* 367c / *Judgement* 477b c 478a 479d 584d 587a 588b [fn 2] 591b 592a 594b 59

43 MILL: *Utilitarianism* 445a 447b 456a-457b 461c 464d 475b d [fn 1]

51 TOLSTOY: *War and Peace*, BK XIII 586d 58

53 JAMES: *Psychology* 796a b

4b The natural moral law and the categorical imperative

12 AURELIUS: *Meditations*, BK III SECT II 262a b BK IV SECT 4 264a BK VII SECT 5 283b-c

19 AQUINAS: *Summa Theologica*, PART I Q 79 A 12 425c-426b

20 AQUINAS: *Summa Theologica*, PART I II Q 91 A 2 208d 209d A 3 ANS 209d 210c Q 94 220d 226b Q 95 A 2 227c 228c A 229b 230c

23 HOBBES: *Leviathan*, PART I 86b 87a 91 95c 96b PART II 134c PART III 165a CONCLUSION 282a 283c

30 BACON: *Advancement of Learning* 96 c

38 ROUSSEAU: *Inequality* 330d 331b 343d 345c

42 KANT: *Pure Reason* 190c d 235a b / *Fund Prin Metaphysic of Morals* 253d 254d 260a 261d 265c 266d 268c 270c esp 269c 273d 287d esp 277d 279d 282a 287b / *Practical Reason* 297a 314d esp 307d 314d 321b 329a esp 327a 329a / *Pref Metaphysical Elements of Morals Ethics* 373d / *Intro Metaphysic of Morals* 386b 387a c 388b 390b d 391c 392b-393a / *Science of Right* 400b d 402a 416b-417b / *Judgement* 571c 572a 594b 595c 604d 606d esp 605d 606b [fn 2] 606a d

43 MILL *Utilitarianism* 445d 446d 458b-459c 464d 465b 469d 470b

46 HEGEL *Philosophy of Right* INTRO par 29 19a-b PART II par 135 47b-d ADDITIONS 84 129b 86 129c

49 DARWIN *Descent of Man* 304a

5. The skeptical denial of first principles or axioms: the denial that any propositions elicit the universal assent of mankind

7 PLATO *Euthydemus* 72d-73a / *Theaetetus* 532b-c

8 ARISTOTLE *Posterior Analytics* BK I CH 3 [72^{b}5-18] 99b / *Metaphysics* BK IV CH 5-6 528c-531c BK X CH 1 [1053^{b}31-1054^{b}3] 580a CH 6 [1057^{a}7-11] 584b BK XI CH 6 [1062^{b}12-1063^{b}14] 590d-592a

12 LUCRETIUS *Nature of Things* BK IV [469-477] 50b

12 EPICTETUS *Discourses* BK II CH 2 164c

18 AUGUSTINE *City of God* BK XIX CH 18 523a-b

25 MONTAIGNE *Essays* 259d-261a 271b-272d 281 284c

30 BACON *Advancement of Learning* 57d-58b

35 BERKELEY *Human Knowledge* INTRO SECT 1-3 405

35 HUME *Human Understanding* SECT IV DIV 26 460b SECT X 503c-509d

42 KANT *Pure Reason* 224a-227a / *Practical Reason* 294c-295d

CROSS-REFERENCES

For: Another discussion of principle in relation to element and cause, *see* ELEMENT 2.

The consideration of the laws of identity and contradiction as both logical and metaphysical principles, *see* LOGIC 1a; METAPHYSICS 3c; OPPOSITION 2a; TRUTH 3c; and for the treatment of contraries as principles, *see* CHANGE 2b; DIALECTIC 3d; OPPOSITION 2b, 3a.

Discussions bearing on sensations, ideas, and definitions as principles of knowledge, *see* DEFINITION 1c, 5; IDEA 1c, 2f; KNOWLEDGE 3; MEMORY AND IMAGINATION 1a; SENSE 5a.

The analysis of evident or self-evident truths, or of immediate as opposed to demonstrated propositions, *see* JUDGMENT 8a; KNOWLEDGE 6c(2); SENSE 4b; TRUTH 3b(3); and for the distinction between analytic and synthetic judgments *a priori*, and between constitutive and regulative principles, *see* IDEA 1d; JUDGMENT 8b-8d.

The conception of axiomatic knowledge as a natural habit of the mind and as one of the intellectual virtues, *see* HABIT 5c; VIRTUE AND VICE 2a(2).

The dependence of demonstration on axioms or self-evident truths, *see* INFINITY 2c; REASONING 5b(1); TRUTH 3c; and for the nature of *reductio ad absurdum* arguments in defense of axioms, *see* REASONING 4d.

Induction as the source of axioms, *see* INDUCTION 3.

Other discussions of the distinction between axioms and postulates, hypotheses, or assumptions, and for the bearing of this distinction on the difference between knowledge and opinion or science and dialectic, *see* DIALECTIC 2a(2), 4; HYPOTHESIS 3-4; KNOWLEDGE 4b; MATHEMATICS 3a; OPINION 1c; TRUTH 4c; WILL 3b(1).

The principles of the several theoretic sciences, *see* ASTRONOMY 2b; DEFINITION 6a; LOGIC 1a; MATHEMATICS 3a; MECHANICS 2b; METAPHYSICS 2b, 3c; PHILOSOPHY 3b; PHYSICS 1b, 2a; TRUTH 4c.

The consideration of ends as principles in the practical order or in moral and political science, *see* GOOD AND EVIL 5c; GOVERNMENT 1c; HAPPINESS 3; MIND 9a; NECESSITY AND CONTINGENCY 5a(2); ONE AND MANY 5b; RELATION 5a(2); TRUTH 2c; and for other discussions of the natural moral law or the categorical imperative as the first principle of the practical reason, *see* DUTY 5; LAW 4b-4c; MIND 9a; NECESSITY AND CONTINGENCY 5a(2); PRUDENCE 2c, 3a; WILL 8d.

Other statements of the skepticism which results from denying first principles or axioms, *see* OPINION 3c; TRUTH 7a.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World* but relevant to the idea and topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collection
II Works by authors not represented in this collection

For the date place and other facts concerning the publication of the works cited consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*

I

AUGUSTINE *Answer to Skeptics*
AQUINAS *Super Boethium de Hebdomadibus*
DESCARTES *The Principles of Philosophy* PREF
HEGEL *Science of Logic* VOL I BK II SECT I CH 2
J S MILL *A System of Logic* BK II CH 6

II

SEXTUS EMPIRICUS *Outlines of Pyrrhonism*
DUNS SCOTUS *Tractatus de Primo Principio* (*A Tract Concerning the First Principle*)
BRUNO *De la causa principio e uno*
SUAREZ *Disputationes Metaphysicae* XII (1) XXII (2)
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LEIBNITZ *Discourse on Metaphysics* XXVI
—— *New Essays Concerning Human Understanding* BK IV CH 7-8
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E HARTMANN *Kategorienlehre*
W E JOHNSON *Logic* PART I CH 14
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B RUSSELL *The Problems of Philosophy* CH 7-8 11
—— *Human Knowledge Its Scope and Limits* PART VI

Chapter 71 PROGRESS

INTRODUCTION

LIKE the idea of evolution with which it has some affinity the idea of progress seems to be typically modern Anticipations of it may be found in an ient and mediaeval thought some times in the form of implicit denials of the idea But in explicit formulation in emphasis and importance progress like evolution is almost a new idea in modern times It is not merely more prominent in modern discussion it affects the significance of many other ideas and so gives a characteristic color or tendency to modern thought

The idea of evolution affects our conceptions of nature and man But the theory of evolution is itself affected by the idea of progress Since it was a major theme at least two centuries before Darwin progress does not depend for its signifi cance upon the theory of biological evolution. The reverse relationship seems to obtain The idea of evolution gets some of its moral social even cosmic significance from its implication that the general motion in the world of living things perhaps in the universe is a progress from lower to higher forms

Darwin thinks Von Baer has defined ad vancement or progress in the organic scale better than anyone else as resting on the amount of differentiation and specialization of the several parts of a being —to which Darwin adds the qualification that the organisms must be judged when they have ar ived at maturity As organisms have become slowly adapted to diversified lines of life their parts will have become more and more differentiated and special zed for various functions from the ad vantage gained by the divis on of physiological labor The same part appea s often to have been modified first for one purpose and then long afterwards for some other and quite dis tinct purpose and thus all the parts are ren dered more and more complex. In accord ance with this view Darwin writes it seems if we turn to geological evidence that organiza tion on the whole has advanced throughout the world by slow and interrupted steps In the kingdom of the Vertebrata it has culminated in man

Whether strictly biological evolution has a single or uniform direction may be disputed in the l ght of evidences of regression and the mul tiplication of lower as well as higher forms But Darwin seems to think that since natural se lection works solely by and for the good of each being all corporeal and mental endowments will tend to progress toward perfection What ever the evidence may be the popular notion of evolution especially when applied by writers like Herbert Spencer to human society or civi lization connotes progress—the gradual yet steady march toward perfection

APART FROM THIS APPLICATION of the idea of evolution to man s world progress seems to be the central thesis in the modern philosophy of history In the minds of some the philosophy of history is so intimately connected with a theory of progress that the philosophy of his tory is itself regarded as a modern development There seems to be some justification for this view in modern works on the tendency of his tory which have no ancient counterparts such as the writings of Vico Condorcet Kant Proudhon Comte J S Mill Hegel and Marx

These writers do not all define or explain progress in the same way Nor do they all sub-scribe to an inviolable and irres stible law of progress which has the character of a divine ordinance replacing or transforming less opti mistic views of providence But for the most part the moderns are optimists Th y ither be lieve in man s perfectibil ty and i i his approach to perfection through his own eff

turned toward the realization of ideals, or they see in the forces of history—whether the manifestations of a world spirit or the pressure of material (i.e., economic) conditions—an inevitable development from less to more advanced stages of civilization according to a dialectical pattern of conflict and resolution, each resolution necessarily rising to a higher level.

As opposed to the optimism of expecting a continual improvement in all things or an irreversible ascent to new heights, the pessimistic view denies that progress is either the law or the hope of history. It believes rather that everything which goes up must come down. As indicated in the chapter on HISTORY, the theory of cycle after cycle of rise and decline—or even the notion that the golden age is past, that it is never to be regained, and that things are steadily getting worse—prevails more in the ancient than in the modern world.

The modern exceptions to optimism in the philosophy of history are notably Spengler and, to a much less extent, Toynbee. But modern pessimism never seems to reach the intensity of the Preacher's reiteration in Ecclesiastes that "there is no new thing under the sun" and that "all is vanity and vexation of spirit." Nor does the modern theory of cycles of civilization, even in Vico, seem to be as radical as that of the ancients. In his vision of cosmic cycles Lucretius sees the whole world crumbling into atomic dust to be reborn again. Herodotus does not relieve the gloom of his observation that in the life of cities "prosperity never continues long in one stay." The eternity of the world means for Aristotle that "probably each art and each science has often been developed as far as possible and has again perished."

LEAVING TO THE chapter on HISTORY the discussion of progress so far as it concerns an explicit philosophy of history, we shall here deal with considerations of progress as they occur in economics, in political theory, in the history of philosophy and the whole intellectual tradition of the arts and sciences.

In this last connection, the great books play a dual role. They provide the major evidence which, on different interpretations, points toward opposite answers to the question whether or not there has been progress in the tradition of western thought. Whatever their readers may think on this subject, the great authors, having read the works of their predecessors, offer their own interpretations of the intellectual tradition. In many cases, especially among the modern writers, their point of departure—even the conception they entertain of the originality and worth of their own contribution—stems from their concern with a deplorable lack of progress, for which they offer new methods as remedies.

Before we enter upon the discussion of economic, political, or intellectual progress, it seems useful to distinguish between the *fact* and the *idea* of progress. When men examine the fact of progress, they look to the past and find there evidence for or against the assertion that a change for the better has taken place in this or that respect. Two things are involved: a study of the changes which have occurred and the judgment—based on some standard of appraisal—that the changes have been for the better. But when men entertain the idea of progress, they turn from the past and present and look to the future. They regard the past merely as a basis for prophecy and the present as an occasion for making plans to fulfill their prophecies or hopes. The fact of progress belongs to the record of achievement; the idea of progress sets a goal to be achieved.

This distinction seems to be exemplified by the difference between ancient and modern considerations of progress. The ancients observe the *fact* of progress in some particulars—almost never universally. Thucydides, for example, in the opening chapters of his *History*, contrasts the power and wealth of the modern city states of Greece with "the weakness of ancient times." "Without commerce, without freedom of communication either by land or sea, cultivating no more of their territory than the exigencies of life required, destitute of capital, never planting their land (for they could not tell when an invader might not come and take it all away, and when he did come they had no walls to stop him), thinking that the necessities of daily sustenance could be supplied at one place as well as another, they cared little for shifting their habitation, and consequently neither built large cities nor attained to any other form of greatness."

But Thucydides does not seem to draw from these observations any general idea of prog ress He does not concretely imagine a future excelling the Periclean age in the magnitude of its wars and the magnificence of its wealth as that period dwarfs antiquity He does not infer that whatever factors worked to cause the ad vance from past to present may continue to op erate with similar results It might almost be said that he does not think about the future certainly he does not think of it as rich in prom ise Knowledge of the past he writes is an aid to the interpretation of the future which in the course of human things must resemble if it does not reflect it

Adam Smith s thinking about economic prog ress represents the contrasting modern empha sis upon the future In one sense both Thucyd ides and Smith measure economic progress in the same way though one writes of the wealth of cities the other of the wealth of nations Both Smith and Thucydides judge economic improvement in terms of increasing opulence the growth of capital reserves the expansion of commerce and the enlarged power in war or peace which greater wealth bestows But Smith in the spirit of Francis Bacon seeks to analyze the causes of prosperity in order to make them work for further progress He is the promoter of progress not merely the historian who witnesses the beneficial effect on produc tivity of an increasingly refined division of la bor and of the multiplication of machinery

To know how these things have operated to bring about the opulence of modern nations as compared with the miserable poverty of primi tive tribes or even the limited property of an c ent cities is to know how to formulate policies which shall still further expand the wealth of na tions For Smith the study of the means and methods by which economic progress has been made serves to determine the policy which is most likely to ensure even greater increments of progress in the future

Marx appears to measure econom c progress by a different standard The transition from the slave econom es of antiquity through feudal serfdom to what he calls the wa e slavery of the industrial proletar at may be accompanied by g eater productiv ty and vaster accumula tions of capital stock But the essential point for him about these successive systems of pro duction is their effect upon the status and con ditions of labor The *Communist Manifesto* notes respects in which under the capitalist system the supposedly free workingman is worse off than were his servile ancestors But if economic progress is conceived as the histori cally determined approach to the final libera tion of labor from its oppressors then capitalism represents both an advance over feudalism and a stage in the march to communism

Each successive economic revolution brings mankind nearer to the goal of the ideal or classless economy Capitalism creates the pro letariat—the revolutionary class which is to be that system s own undoing The overthrow of the landed aristocracy by the bourgeoisie thus prepares the way for the dictatorship of the proletariat as that in turn liquidates the obsta cles to the realization of the perfect communist democracy

We are not here concerned with the details of this history and prophecy but only with the theory of progress which it involves In the first place it seems to set an ultimate goal to progress while at the same time it makes prog ress a necessary feature of what is for Marx as it is for Hegel the dialectic of history Those who think that the inevitab lity of progress ought to render progress as interminable as his tory itself find some inconsistency in this tenet of dialectical materialism as well as in Hegel s notion of the necessary dialectical stages by which the Absolute Idea reaches perfect reali zation in the German state *Can progress be the inner lau of history and yet reach its goal before the end of time?*

There may be some answer to this question in a second aspect of the theory of progress which goes with a dialectic of history The progress which the successive stages of history represent resides in the quality of human insti tutions rather than in the nature of man If more economic justice or greater political lib erty is ach eved it is not because the later gen erations of men are born with a nature more disposed to goodness or v rtue but because better inst tut ons h ve e olved f om tl e con fl ct of h sto cal forc s Fu the more accord ng to Marx m n s nature is only partly de

termined at birth Part remains to be determined by the social and economic circumstances of his life—by the system of production under which he lives Hence though institutional progress may arrive at its historical goal with the establishment of the ideal economy it may be possible for further progress to be made throughout the rest of time by the improvement of men themselves when at last their natures can develop under ideal circumstances

WE HAVE NOTED TWO great issues in the characteristically modern discussion of progress Is the goal of progress definitely attainable or is its goal an ideal progressively approximated but never realized? Is progress accomplished by the betterment of human institutions or by improvements in the nature of man?

The second question has a critical bearing on the first especially for those who conceive man as infinitely perfectible It also relates to the problem of the evolutionist whether a higher form of life on earth will evolve from man or whether the future belongs to the progressive development of human nature—biologically or culturally Darwin is unwilling to admit that man alone is capable of progressive improvement but he does affirm that man is capable of incomparably greater and more rapid improvement than is any other animal

Rousseau on the other hand claims that the faculty of self improvement is one distinction between man and brute which will admit of no dispute But he also thinks that this faculty is the cause of human decline as well as progress A brute at the end of a few months he writes is all he will ever be during his whole life and his species at the end of a thousand years exactly what it was the first year of that thousand While the brute which has acquired nothing and has therefore nothing to lose still retains the force of instinct man who loses by age or accident all that his *perfectibility* had enabled him to gain falls by this means lower than the brutes themselves

One other issue concerning progress remains to be stated It raises the question of freedom or necessity in history Is progress inevitable in the very nature of the case or does it occur only when men plan wisely and choose well in their efforts to better themselves or the conditions of their lives?

In his *Idea of a Universal History* and his *Principle of Progress* Kant finds the possibility of progress in man s potentialities for improvement He regards the realization of this possibility as a work of freedom rather than a manifestation of historical necessity Political progress may have an ultimate goal—the world republic or federation of states But this according to Kant s conclusion in the *Science of Right* is an impracticable idea and serves only the regulative purpose of promoting a continuous *approximation* to Perpetual Peace Hegel s theory of the progressive realization of the idea of the state in history seems to represent the contrary position on both points. Progress is an historical necessity and it reaches an historic consummation

THE CONTRAST BETWEEN ancients and moderns with respect to political progress seems to be the same as that which we observed between Thucydides and Adam Smith with regard to wealth The ancients assert the superiority of the present over the past and even trace the stages by which advances have been made from primitive to civilized conditions But they do not extend the motion they observe into the future The moderns look to the future as to a fulfillment without which present political activity would be undirected

According to Aristotle for example the state is the last stage in the development of social life which begins with the family When several families are united and the association aims at something more than the supply of daily needs the first society to be formed is the village The village or tribal community in turn becomes the unit out of which a larger and more truly political community is formed When several villages are united in a single complete community large enough to be nearly or quite self sufficing the state comes into existence

Aristotle sees this development not merely as a progress from smaller and weaker societies to larger and more powerful ones but also as an advance toward the realization of man s political nature Absolute or despotic government by the eldest natural to the family still persists in the tribe This is the reason why the Hellenic

states were originally governed by kings because the Hellenes were under royal rule before they came together as the barbarians still are Not until the domestic or tribal form of government is replaced by political or constitutional government—not until kings and subjects are replaced by statesmen and citizens—is the state or political community fully realized

But Aristotle does not conceive the development he describes as one continuing into the future He does not imagine a larger political unity than the city state as Kant is able to envisage a world state as the ultimate formation toward which the progressive political unification of mankind should tend Though Aristotle recognizes that new institutions have been invented and old ones perfected his political theory unlike Mill s does not seem to measure the goodness of the best existing institutions by their devotion to further progress

Considering the criterion of a good form of government Mill criticizes those who separate the maintenance of order or the preservation of existing institutions from the cultivation of progress Progress includes Order he writes but Order does not include Progress Order is not an additional end to be reconciled with Progress but a part and means of Progress itself If a gain in one respect is purchased by a more than equivalent loss in the same or in any other there is not Progress Conduciveness to Progress thus understood includes the whole excellence of government

Progress fails to define good government Mill adds unless we understand by the term not merely the idea of moving onward but quite as much the prevention of falling back. The very same social causes are as much required to prevent society from retrograding as to produce a further advance Were there no improvement to be hoped for life would not be the less an unceasing struggle against causes of deterioration as it even now is Politics as conceived by the ancients consisted wholly in this

Though we no longer hold this opinion though most men in the present age profess a contrary creed *believing that the tendency of* things on the whole is toward improvement we ought not to forget that there is an incessant and everflowing current of human affairs toward the worse

According to Mill the ideally best polity is representative government on democratic principles By a just distribution of political rights and by the fullest grant of liberties it serves better than any other form of government to promote the virtue and intelligence of the people themselves This is the ultimate end of political progress Inferior forms of government such as despotic monarchy may be justified for people as yet unfit for self government but only if they also work for progress *i e* if they carry those communities through the intermediate stages which they must traverse before they can become fit for the best form of government

The whole theory of good government is thus for Mill a theory of progress in which we must take into account not only the next step but all the steps which society has yet to make both those which can be foreseen and the far wider indefinite range which is at present out of sight We must judge the merits of diverse forms of government by that ideal form which if the necessary conditions existed for giving effect to its beneficial tendencies would more than all others favour and promote not some one improvement but all forms and degrees of it

IN THE FIELD OF THE ARTS and sciences or culture generally the modern emphasis upon progress seems to be even more pronounced than in the spheres of economics and politics Lack of progress in a science is taken to indicate that it has not yet been established on the right foundations or that the right method for discovering the truth has not yet been found Lack of agreement in a particular field is the chief symptom of these defects

The fact that philosophy has been cultivated for many centuries by the best minds that have ever lived and that nevertheless no single thing is to be found in it which is not a subject of dispute and in consequence which is not dubious leads Descartes to propose his new method He hopes this may ensure progress *in philosophy of the same sort which the* new method has in his view accomplished in mathematics The *Novum Organum* of Bacon seems to be dedicated to the same end of progressively augmenting knowledge in all those

fields in which according to the inventory made in the *Advancement of Learning* of the present state of the sciences no or little progress has been made since antiquity Similarly Locke Hume and Kant insist that a study of the human mind should precede all other studies in order to save men from fruitless disputes concerning matters beyond their capacities for knowledge they hope thereby to encourage research in areas where progress can be made

The comparison of different disciplines or subject matters with respect to their progress leads to the condemnation of those which lag behind The great scientific advances of the 17th century tend to intensify the complaint about philosophy especially metaphysics The progress which has been made from the beginning in mathematics and more recently in physics means to Kant that each of these disciplines has found the safe way or the secure path of a science By comparison metaphysics has not yet even made a beginning A hundred years later William James is still to say that by comparison with the progress of knowledge in the natural sciences metaphysics belongs to the future

The notion that any field of learning has attained its full maturity seems to Bacon to be the presumption of those philosophers who seeking to acquire the reputation of perfection for their own art try to instill the belief that whatever has not yet been invented and understood can never be so hereafter When ever such belief prevails learning languishes By far the greatest obstacle to the advancement of the sciences and the undertaking of any new attempt or departure is to be found in men s despair and the idea of impossibility

THOUGH THE ANCIENTS do not evidence this presumption of perfection in their arts and sciences neither do they fret about lack of progress Nor does the disagreement of minds seem to them to signify an unhealthy condition which requires new and special methods to cure

The investigation of the truth is in one way hard in another easy writes Aristotle An indication of this is found in the fact that no one is able to attain the truth adequately while on the other hand we do not collectively fail but everyone says something true about the nature of things and while individually we contribute little or nothing to the truth by the union of all a considerable amount is amassed Aristotle puts the intellectual tradition to use by adopting the policy of calling into council the views of those of our predecessors who have declared any opinion on whatever subject is being considered in order that we may profit by whatever is sound in their suggestions and avoid their errors

But in the opinion of the moderns the intellectual tradition can also be the greatest impediment to the advancement of learning if it is received uncritically and with undue reverence for the authority of the ancients. The respect in which antiquity is held today Pascal says, has reached such extremes in those matters in which it should have the least preponderance that one can no longer present innovations without danger This is the common complaint of Hobbes Bacon Descartes and Harvey The reverence for antiquity and the authority of men who have been esteemed great in philosophy have according to Bacon retarded men from advancing in science and almost enchanted them

Harvey agrees with Bacon that philosophers or scientists should not swear such fealty to their mistress Antiquity that they openly and even in sight of all deny and desert their friend Truth Harvey has a much higher opinion than Bacon of the achievements of antiquity The ancient philosophers he writes whose industry even we admire went a different way to work and by their unweaned labor and variety of experiments searching into the nature of things have left us no doubtful light to guide us in our studies In this way it is that almost everything we yet possess of note or credit in philosophy has been transmitted to us through the industry of ancient Greece

His admiration for the ancients does not however lead Harvey to rest on their achievements When we acquiesce in the discoveries of the ancients and believe (which we are apt to do through indolence) that nothing farther remains to be known then in his opinion we suffer the edge of our ingenuity to be taken off and the lamp which they delivered us to be

extinguished No one of a surety he con tinues will allow that all truth was engrossed by the ancients unless he be utterly ignorant (to pass by other arts for the present) of the many remarkable discoveries that have lately been made in anatomy

In his own anatomical researches Harvey adopts an attitude toward the work of his predecessors both ancient and recent which remarkably resembles the attitude expressed by Aristotle toward his scientific forebears As we are about to discuss the motion action and use of the heart and arteries it is imperative on us Harvey declares first to state what has been thought of these things by others in their writings and what has been held by the vulgar and by tradition in order that what is true may be confirmed and what is false set right by dissection multiplied experience and accurate observation It is precisely this attitude which Bacon expressly condemns

Bacon sees no genuine method of science but merely a cultivation of opinion in those who prepare themselves for discovery by first ob taining a full account of all that has been said on the subject by others Those who begin in this way it is the judgment of Descartes sel dom o further Particularly the followers of Aristotle would think themselves happy he says f they had as much knowledge of nature as he had even if this were on the condition that they should never attain to any more They are like the ivy that never tries to mount above the trees which give it support and which often even descends again after it has reached the summit for it appears to me that such men also sink again—that is to say some how render themselves more ingnorant than they would have been had they absta ned from study altogether For not content with know ing all that is intellig bly explained in their au thor they wish in addition to find in him the solution of many difficulties of which he says nothing and in regard to which he possibly had no thought at all

Pascal takes a more moderate view We can profit he thinks from a lim ted respect f r the ancients Just as they made use of those discov eries which have been handed do vn to them only as a means for making new ones and this happy audacity opened the road to great things so Pascal suggests must we accept those which they found for us and follow their example by making them the means and not the end of our study and thus try to surpass them by imitating them For what would be more wrong than to treat the ancients with more caution than they did those who preceded them and to have for them this inviolable re spect which they only deserve from us be cause they did not feel a similar respect for those who had the same advantage over them?

MODERN WRITERS SEEM to conceive the law of intellectual progress by an analogy between the mind of the race and the individual mind Where Aquinas says merely that it seems nat ural to human reason to advance gradually from the imperfect to the perfect adding in the past tense that hence the imperfect teach ing of early philosophers was afterwards per fected by those who succeeded them Pascal generalizes the insight and gives it future sig nificance Not only does each man progress from day to day in the sciences but all men combined make constant progress as the uni verse ages because the same thing happens in the succeeding generations of men as in the dif ferent ages of each particular man So that the whole success on of men in the course of so many centuries should be regarded as the same man who exists al vays and learns continually

At this point Pascal applies his metaphor to effect a re ersal of the relation between the moderns and the ancients Since old age is the time of life most distant from childhood who does not realize that old age in this universal man should not be sought in the times closest to his birth but in those which are farthest away from it? Those whom we call ancients were really novices in all things and actually be longed to the childhood of man and as we have added to their knowledge the experience of the centuries wh ch followed them it is in ourselves that may be found this antiquity which we revere in others

Whether by accident or borrowing th s characteristically modern v e v of the adv n tage pro ress confers upon modernity s ex pressed in s milar langu g by Hobbes and Bacon Though I re er nce those m n of an c ent times writes Hobbes wl o either hav

written truth perspicuously or have set us in a better way to find it out for ourselves yet to the antiquity itself I think nothing due for if we will reverence age the present is the oldest

Antiquity as we call it writes Bacon is the young state of the world for those times are ancient when the world is ancient and not those we vulgarly account ancient by computing backwards so that the present time is the real antiquity

To secure a sound not specious progress in all things of the mind Bacon recommends the avoidance of two extremes the affectations of antiquity and novelty for antiquity envies new improvements and novelty is not content to add without defacing Since antiquity deserves that men should stand awhile upon it to view around which is the best way the great books of the past can lay the foundations for progress but only if they are properly read

Let great authors therefore have their due Bacon declares but so as not to defraud time which is the author of authors and the parent of truth

OUTLINE OF TOPICS

REFERENCES

To find the passa s cited use the numbers in heavy type wh ch are the volume and pa e numbers f the passa es refer ed to For example in 4 Ho IER *Il ad* K II [65 283] 12d the number 4 is the number f the volume in the set the number 12d indicates that the passage is n ection d of page 12

PA SECTION When the text is p inted in one column the letters a and b refer to the upper and lower halves of the page For exampl n 53 JAM s *P ychol gy* 116 119b the passage begins in the upper half of pa e 116 and e ds in the lower half of pa e 119 When the t t is printed in two columns the lette s a and b refer to the upper and lower hal es of the left hand side of the page the letters c and d to the upper and lower h lves of the right hand sid of the page For e ample in 7 PLATO *Sy posium* 163b 164c tl e passa begins in the lower half of the left hand side f page 163 and ends in the upper half of the r ht hand s de of pa e 164

AUTHOR S D VISIONS One or more of the m n divisions of a work (such as PART BK CH SECT) are sometimes included in the refer nce line numbers in brackets are g ven in certain cases *e g Il ad* BK II [65 283] 12d

B BLE REF RENCES The refer nces are to book chapter and verse When the King James and Do ay versions differ in t tle of book o in th numbering of chapters or verses the King James versi n is c ted first and the D uay ind cated by a (*D*) f llows g OLD TESTA M NT *Nehemiah* 7 45—(*D*) *II Esdra* 7 46

SYN BOLS The abbreviation sp call the reader s attention to one or mo e espec ally relevant parts of a wh le reference pass m sign fies that the top c is discu sed intermittently rather than c ntinuou ly in the wo k or passage c ted

F r add ti nal information concerning the style of the references see the Expl nation f Refere ce Style for general gu dance in the u e of *Th Great Ide s* consult th Prefac

1 The idea of progress in the philosophy of history

1a Pro idence nd necess ty in the theory of prog e s the d alectical development of Sp rit or matter conflict as a ource of prog ess

5 AE CHYLUS *Pr metheus B nd* [436-5 5] 44c 45b
7 PLATO *P otagoras* 44a 45a
18 AU USTINE *Co f ion* BK XII par 49-51 124a d / *City of God* BK X CH 14 307c 308a BK XV XVIII 397b d 507a esp K XV CH 4 397b d 400 BK XVI CH 3 423d-425b H 2 431b BK XVI CH I 2 449a-450 K XV I CH I 472b d CH 54 506d 507a c K XXII CH 30 618c d
38 ROU S AU *I equal ty* 338c 339b
43 MILL *Repr sentati e Government* 376a c 387 d
46 H G *Pl l ophy of Right* INTRO par 32 33 20a d PART I par 340-360 110b-114 esp pa 342 110 d A DITI NS 36 122b c / *Ph lo ophy f H tory* 153a 369a,c esp INTRO 156d 190b 203a 206a c PART IV 368d 369a c
49 D RW N *Des ent f M* 320d 321c 322d 323 328b 596c
50 M RX *Capital* 6c 7d 10a 11d esp 11b d
50 M X ENG LS *CommunistM ifest* 419b d 425b
51 TOLSTOY *War and Peace* EPILOGUE I 645a 650c esp 646b c EPILOGUE II 675b d 676d 677b 679b 680b
54 FR UD *Beyond the Pleasure Principle* 654a c / *Ci l tion a d Its Di co tents* 801d 802a c / *New I trod tory Le tu es* 882b 883

1b Optimism or mel ori m the doctrine of human perfect b lity

38 ROUSS AU *Inequ l ty* 338b c 347d 348a / *Soci l Cont act* BK II 420a b
40 GI ON *Decl and F ll* 633c 634a c
42 KANT *Judgement* 586a 587a
43 F D RALIST NUM BER 6 41a NU BER 5 174 d
43 MILL *L berty* 287d / *Repr entati e Go er ment* 335d 336a / *Ut l tar sm* 452a b 460 461b
46 H G *Ph l phy f Ri ht* I I pa 343 110d 111 / *Ph lo phy of H t ry* 178a 179

(1 *The idea of progress in the philosophy of history* 1b *Optimism or meliorism: the doctrine of human perfectibility*)

47 GOETHE *Faust* PART I [570-573] 16a
49 DARWIN *Descent of Man* 294d-295a; 317c-319a esp 318d; 328d-330a c esp 329d-330a c; 596b-597a c esp 596d-597a c
54 FREUD *Beyond the Pleasure Principle* 654a-c / *War and Death* 759d / *Civilization and Its Discontents* 781a; 801c-802a c

1c Skeptical or pessimistic denials of progress: the golden age as past; the cyclical motion of history

OLD TESTAMENT *Ecclesiastes* 1:1-15; 2:12
6 HERODOTUS *History* BK I 2b
7 PLATO *Timaeus* 443d-446b / *Critias* 479a-485d / *Statesman* 586c-589c / *Laws* BK I 640d-641a; BK IV 681b-d
8 ARISTOTLE *Metaphysics* BK XII CH 8 [1074^b1-14] 604d-605a
12 LUCRETIUS *Nature of Things* BK V [999-1010] 74a-b; [1405-1435] 79b-d
12 AURELIUS *Meditations* BK II SECT 14 258d; BK VII SECT 1 279b; SECT 49 282d; BK IX SECT 14 293a; SECT 28 293d-294a; BK X SECT 27 299d
13 VIRGIL *Aeneid* BK VIII [306-336] 267a-268a
14 PLUTARCH *Sulla* 372a-b
15 TACITUS *Annals* BK I 1 51b-c; 57c-58d; BK XIV 146b-147a; 151d / *Histories* BK II 232d-233a; BK III 255b-c
18 AUGUSTINE *City of God* BK XII CH 13 350a-d
21 DANTE *Divine Comedy* HELL, XIV [94-120] 20c-d
25 MONTAIGNE *Essays* 103c-104d; 276b-279c; 439c-440b; 443b
27 SHAKESPEARE *Sonnets* LIX 595b
29 CERVANTES *Don Quixote* PART I 27b-28a
30 BACON *Advancement of Learning* 15a-b
36 SWIFT *Gulliver* PART I 79a-80a; PART III 118-121b esp 121a-b; 126a; PART IV 168a-b
37 FIELDING *Tom Jones* 268
38 ROUSSEAU *Inequality* 329a-334a c; 342c-345c; 347a-348a; 362a-366d / *Social Contract* BK III 419c-420a
40 GIBBON *Decline and Fall* 23b; 32b-33a
42 KANT *Judgement* 586-587a
43 FEDERALIST NUMBER 6 41a
43 MILL *Representative Government* 335d-336
46 HEGEL *Philosophy of History* INTRO 179d-180c; 183d-184d
47 GOETHE *Faust* PROLOGUE [281-292] 8a; PART I [4072-4095] 99b-100a
48 MELVILLE *Moby Dick* 316b
49 DARWIN *Descent of Man* 323a
51 TOLSTOY *War and Peace* EPILOGUE I 645a-646c
54 FREUD *Civilization and Its Discontents* 776c-777d

2 The idea of progress in the theory of biological evolution

38 ROUSSEAU *Inequality* 334b-d
47 GOETHE *Faust* PART II [8260-8264] 201a; [8321-8326] 202b-203a
49 DARWIN *Origin of Species* 1c-3b passim; 41c-42a; 60b-62a; 63b-64d; 96b-103c esp 96b-98a; 102d-103c; 176b-178a; 180c-d; 243b-d / *Descent of Man* 294d-295c; 340d-341d
53 JAMES *Psychology* 90b-91a; 95b
54 FREUD *Beyond the Pleasure Principle* 651d-654c esp 653b-654a / *Civilization and Its Discontents* 768d-769a

3 Economic progress

3a The increase of opulence: the division of labor as a factor in progress

5 ARISTOPHANES *Plutus* 629a-642d esp [489-534] 634c-635b
6 THUCYDIDES *Peloponnesian War* BK I 350d-352c d
7 PLATO *Republic* BK II 316c-317a
35 LOCKE *Civil Government* CH V SECT 42-50 34a-35d
36 SWIFT *Gulliver* PART IV 154b-155b
38 MONTESQUIEU *Spirit of Laws* BK XXIII 191a-c
38 ROUSSEAU *Inequality* 352a-353a; 365b-366b
39 SMITH *Wealth of Nations* BK I 3a-6d; 30b-c; 31b; 38a; 40b-c; 55b-c; 71a-d; 75c-76a c; 105a; BK II 142d-151c; BK III 163a-c; BK IV 190b-191a; 291a-295c
40 GIBBON *Decline and Fall* 21c-23b; 498d; 642a-c; 655d-658b esp 655d-656
41 GIBBON *Decline and Fall* 451d-452a
42 KANT *Fund Prin Metaphysic of Morals* 253c / *Judgement* 586a-587a
43 FEDERALIST NUMBER 12 56b-d
43 MILL *Utilitarianism* 452a-b
46 HEGEL *Philosophy of Right* PART III par 198-199 67b-c / *Philosophy of History* PART II 263b-d; PART IV 323c-d; 335a-336c; 368c
50 MARX *Capital* 16c-d; 31a-37c passim esp 32a-c; 34c-35a; 157a-180d passim esp 160c-164a; 178c-179a; 218c-219a; 308d-311b; 377c-378a
50 MARX-ENGELS *Communist Manifesto* 421b-c

3b The improvement of the status and conditions of labor: the goals of revolution and reform

9 ARISTOTLE *Politics* BK I CH 4 [1253^b31-39] 447b-c; BK II CH 9 [1269^a33-^{b}7] 465c-c; CH 12 [1273^b36-1274a22] 470c-d / *Athenian Constitution* CH 2 553a-c; CH 5-6 554d-555c
14 PLUTARCH *Lycurgus* 36-37c / *Solon* 68d-70c / *Agis* 648b-d; 656d / *Tiberius Gracchus* 671b-d; 681a-c / *Caius Gracchus* 681b-d; 689a-c

15 T ITU *Annals* BK XIII 132a c
20 AQUIN S *Summa Theolog ca* PART I II Q 105 A 4 ANS and REP 1-4 318b 321a
38 MONTESQU EU *Spirit of Laws* BK XV 111a c
39 SMITH *Wealth of Nations* BK I 6a d 27b-37b esp 33c 51a 62a passim BK I 165b-175b BK IV 182a b 200 201a 251c d
40 G BBON *Decline and Fall* 16c 17b 144a c 628 629a
41 G BON *D cline and Fall* 452d 453a c
43 CONSTITUTION O THE U S ARTICLE IV SECT 2 [529-535] 16b AMENDMENTS XIII 18c
43 MILL *Representat e Government* 332c 339d 340 393c 394d
44 B SWELL *Johnson* 172b d
50 MARX *Cap tal* 7b 8c 9 esp 9c 111c 146c esp 113c 115c 131a 146c 209c 215a 231b-248d esp 235 236c 238c 241a c 248 d 295a d 367b-368b 377 378d
50 MARX EN LS *Communist Man f to* 415c 416d 419b d 423b-425b 426b d 429b c 432b-434d
51 TOLSTOY *War d P ace* BK V 211a 213a BK VI 235a
52 DO TO VSKY *Brothers Karam ov* BK VI 165b
54 FR UD *C v li at n and Its Discontents* 787d 788a c p 787d 788b [fn 3] / *New I t oductory Lectur s* 883d 884c

3c Man s progress e conquest of the forces of n ture through sc nce and nvent on

5 AESCHYLUS *Prom theus Bound* [44 506] 44c 45a
5 S HOCLES *Ant gone* [33 -3 5] 134a b
5 EUR I ES *Suppl nts* [95 218] 260a b
12 LUCRETIUS *N ture of Th gs* BK V [241-1296] 77b 78a p s m [361 1378] 78d 79a
13 VI GIL *Geo gics* I [12 46] 40b-41a
14 PLUT RCH *M r ll* 252a 255
28 GIL RT *Load t n* BK V 100 101d
28 GAL L O *Two New Sciences* S COND DAY 191b 193b
30 B CO *Ad ancement of Learn g* 14b 15a 56b / *N um Org num* BK I APH 5 107 b A H 81 120b APH 124 133c d APH I 9 134d 135d K I A H 39 169d 170 APH 49-51 188b 194c / *New Atlant s* 210d 214d
31 D S ARTES *D s urse* ART VI 60d 67 esp 61b d 66d 67 c
36 SWIFT *Gull er* P RT I 106a 107a
38 MONT SQUIEU *Sp it of La* K XVIII 126c d BK XXI 191 c
38 ROUS EAU *I q lity* 339b c 348d 353c 363b 365b 366b
39 S TH *Wealth f N tions* K I 5b 6d
40 G ON *Decl nd F ll* 633d 634a
43 MILL *Ut lit sm* 452 b
45 FOURI R *Th ory of H at* 170a 172a 183b 184a
46 HEGEL *Ph l sophy of H story* INTRO 195b d PART I 243d 244c PART II 267a b PART IV 347d 348a
47 GOETHE *Faust* PART II [6835-6860] 167b 168a
48 MELVILLE *Moby Dick* 204a b
50 MARX *Capital* 86a c 170a c 180d 188c c p 181c 184b 187d 188a 239c d 253a 255a esp 253d 254b 299b d
50 MARX ENGELS *Communist Man festo* 420d 421a 421d
54 F EUD *C il tion a d Its D scontents* 777a c 778b 779a 802a c / *New I troductory Lectu es* 882d 883a

4 Progress in polit cs

4a The invent on and mpro ement of pol t cal in titutions the mainten nce of po lit cal order in rel tion to progress

5 S HOCL *Antigo* [332 375] 134a b
6 THUCYDIDES *P l ponnes a War* BK I 366d 367a
7 PLATO *Republic* BK II 316c 318a BK IV 344b d / *Laws* K III 663d 666d
9 ARISTOTLE *P lit cs* K I CH 2 445b 446d esp [1252^b27 1253] 446 b BK II CH 8 [1 68^b23 269^a28] 464d 465b K VII CH 10 [1329 40-^b35] 533d 534b / *Athenian Con stitut n* 553a 584a c passim esp CH 41 571c 572a
12 LUCRETIUS *Natu e of Things* BK V [1011 1027] 74b c [105 6] 75 76b
13 VIRG *A n d* BK [54 296] 110a 111a BK VI [845-853] 233b 234a
14 PLU ARCH *Lycu gus* 32a 48d / *Solon* 64b d 77a c
15 TAC TU *Annal* BK III 51b-c
20 AQU NAS *S mm Theologica* PART I-I Q 97 A I ANS 236a d
23 MACHIAV LLI *Prin* CH XXVI 36b-37d
23 HOBBES *Leviathan* PART II 153c 154a 164a c
35 LOCKE *Civil Government* CH XIII SECT 157-58 61 62b
35 HUME *Human Understandi g* SECT I D V 5 453a b
38 MONTESQU EU *Spirit of Laws* K II 9 d BK IV 16 17a K X 62b K X 75b d K X V 107d X X X 140d 141a BK XXI 170a K XXIV 201b
38 ROUSS AU *I equ lity* 323 325b esp 324d 354d 355b 356a b / *Politic l E onomy* 367a 385 / *Social Contr ct* K I 391b 392 K I 400c-406a K III 420 c 423 424a
40 G ON *D l n d F ll* 617a
41 G BBON *D l e d Fall* 71d 80b 202 d 218 219 403b-404d
42 K NT *Scien f R ght* 438d-439a 450d 452a 456b-458a, / *J dgement* 586b-c
43 F D RAL NU ER 9 47a-49 NUM 14 60 d 62 d NUM R 37 38 117d

(4 *Progress in politics* 4a *The invention and improvement of political institutions: the maintenance of political order in relation to progress.*)

NUMBER 47 51 153c 165a passim NUMBER 52 165d 167b NUMBER 63 193c 194a NUMBER 65 200b-c NUMBER 78 230a b

43 MILL *Liberty* 272a 289c d 300d 302c / *Representative Government* 327a 336c 350b 355b passim 370a 380b passim esp 376a c 387c d / *Utilitarianism* 460a 461a 475c d

44 BOSWELL *Johnson* 172b d 204c 205b

46 HEGEL *Philosophy of Right* PART III par 298 99c ADDITIONS 176 147c d / *Philosophy of History* INTRO 203b 206a c PART I 208b d 258b d PART II 263b d PART IV 318b 335a 336c 342a 343a 346a c

51 TOLSTOY *War and Peace* BK VI 238c 243d

54 FREUD *Civilization and Its Discontents* 780b-781a

4b The progressive realization of the idea of the state

46 HEGEL *Philosophy of Right* PART III par 256 79d 80a par 259-260 82a 83a par 270 84d 89c par 340-360 110b 114a c esp par 349 111d 112a ADDITIONS 19 20 119 120b 152 141c d 164 144c 145a / *Philosophy of History* INTRO 170c 178a 180c 183c 203b 206a c PART I 230a 231b PART IV 315a 333b c 342d 343a

4c The growth of political freedom: the achievement of citizenship and civil rights

6 HERODOTUS *History* BK V 171c 175b

6 THUCYDIDES *Peloponnesian War* BK II 396b 397d BK VIII 590a c

9 ARISTOTLE *Politics* BK II CH 12 470b-471d BK III CH 15 [1286b8 21] 484d 485a BK IV CH 13 [1297b 6-28] 498a BK V CH 4 [1304 18 38] 505d 506a / *Athenian Constitution* CH 41 553a 572a passim esp c 1 41 571c 572a

13 VIRGIL *Aeneid* BK VI [756 853] 231a 234a BK VIII [626-731] 275b 278b

14 PLUTARCH *Theseus* 9c d / *Romulus* 22c / *Poplicola* 79d 80a

15 TACITUS *Annals* BK III 51b 52a BK XI 106a d

35 LOCKE *Civil Government* CH VI SECT 94 46b c CH VIII SECT 100-111 47c 51a CH XIV SECT 166 63a 64a

38 MONTESQUIEU *Spirit of Laws* BK XI 75b 78a

39 SMITH *Wealth of Nations* BK III 170c 173b BK IV 269d 271d

40 GIBBON *Decline and Fall* 14a d 15c 521a 523 c

41 GIBBON *Decline and Fall* 403b-404d

43 FEDERALIST NUMBER 9 47a c NUMBER 14 62b-d NUMBER 26 92a 94b passim NUMBER 84 252b c

43 MILL *Liberty* 267b d 268c / *Representative Government* 328d 332d esp 331a 352a b 367b c 381b 382c 394a 396d

46 HEGEL *Philosophy of History* PART II 275b-276a PART III 288c 295d 296c PART I 342a 346c

50 MARX ENGELS *Communist Manifesto* 423d 425b

51 TOLSTOY *War and Peace* BK I 10a b

5 Forces operating against social progress: emotional opposition to change or novelty; political conservatism

5 ARISTOPHANES *Birds* 542a 563d esp [904 1057] 554a 555d / *Ecclesiazusae* [730-8 6] 623c 625b

7 PLATO *Republic* BK IV 344b d / *Laws* BK II 654c 655b BK IV 678c 679a BK VII 717d 718d

14 PLUTARCH *Agis* 648b d 656d

15 TACITUS *Annals* BK XIV 151d 152b

20 AQUINAS *Summa Theologica* PART I II Q 97 A 2 236d 237b

21 DANTE *Divine Comedy* PURGATORY XIV [91 126] 74c 75a PARADISE XV XVI 128b-132a

23 MACHIAVELLI *Prince* CH VI 9b c

23 HOBBES *Leviathan* PART II 154b c

25 MONTAIGNE *Essays* 47a 51a 131b 132a 208b c 281a 282a 318c 319b 458b-c 462c 465c 504c 506a

27 SHAKESPEARE *Coriolanus* ACT II SC II [119-128] 367b

30 BACON *Advancement of Learning* 15a b 61b 90b d / *Novum Organum* BK I APH 39-43 109c 110a APH 90 124d 125a / *New Atlantis* 205d 207b

31 DESCARTES *Discourse* PART II 45c-d PART VI 61a

33 PASCAL *Pensées* 294 225b 226b 325 230b-231a

35 LOCKE *Civil Government* CH XIII SECT 157 158 61c 62b CH XIX SECT 223 224 76c 77a

36 SWIFT *Gulliver* PART III 105 106b

38 MONTESQUIEU *Spirit of Laws* BK V 22a b BK XIV 104c BK XIX 137c 140c passim

38 ROUSSEAU *Inequality* 324a b / *Social Contract* BK II 401c 403a 404c-405a BK III 419-420a BK IV 437d 438b

39 SMITH *Wealth of Nations* BK I 27b 37b esp 27b 28d 33 34b 40b c 55b d 80c 96d 97b 109d 110d BK IV 201b c

40 GIBBON *Decline and Fall* 459a c

43 DECLARATION OF INDEPENDENCE [15 25] 1b

43 FEDERALIST NUMBER 14 62a d NUMBER 37 38 117d 125a passim NUMBER 70 211d 212a

43 MILL *Liberty* 293b 302c passim / *Representative Government* 327b d 332d 335d 336c 344a b 346 348c passim 350b 355b passim 357 376a c 377b 378 387c d

44 BOSWELL *Johnson* 189d 190b

46 H g L *Philosophy of Right* PA T III par 274 92a par 355 112d 113a ADDITIONS 166 145b c / *Philosophy of History* INTRO 187d 188b P RT I 209b 235d 236a 257 PART II 280b 281b PART III 302 d PART IV 351b 353a 367 b
47 GOETHE *Faust* PART I [197 1979] 46b-47a PART I [7963 7964] 194a
48 M LVILLE *Moby Dick* 228b 229b
49 DARWIN *Descent f M n* 323a
50 MARX *Cap tal* 6d 7 174b c 234a 236c 239b 240b
50 MARX ENGELS *Communist Ma ifesto* 424b-c 426b-428d passim 429 -433d passim sp 433c d
51 TOLSTOY *Wa a d Peace* K VI 239a 240 240b d K VIII 303a 305b BK IX 354b c BK X 403a c EP LOGUE I 645a 646 647b c 666c 669d
53 J MES *Psy h logy* 79b
54 FREUD *W and De th* 759c 761c esp 759c d / *C ili ation a d Its D scont nt* 776 777 780d 781d esp 781 783c 791d esp 785c 791b d 799a 802 esp 800c 801c / *New I troductory Lectu r s* 834c 853a b

6 Intellectual or cultural progress ts sources and impediments

10 G EN *Natural Faculties* BK CH 10 207b d
20 AQUINAS *Summa Theolog a* PART I I Q 97 A AN 236a d
23 HOBB S *Leviatha* PART V 274c d
24 RABELAIS *Garg ntua a d Pantagru l* BK II 81d 82b
25 M NTAIGNE *Ess y* 271b c
28 G IL O *Two New S ie ce* TH RD DAY 166 d 203c d
28 HA Y *Mot o f the H a t* 268 285b c
30 BA ON *Ad ncement of Le rn g* 1 101d esp 1 15 20b 25 29a 32 33d 34a 35b 36c 38d 39 51d 54b / *Novum O ganum* BK I APH 38 46 109c 110c A H 85 121d 122d PH I 9 134d 135d / *N Atla t s* 203d 207b
31 DESCA T D urs AR 45b-46a
32 M LTON *A pag tica* 384a b
33 PASC L *Vacu m* 355a 358b
35 LO K *H ma Underst d g* BK C I X ECT 6 3 293a 294d pas m
38 ROUS E U *I qual ty* 336a 337a 337d 348 348d 353c 362 363 / *Soci l Cont ct* K I 393b
40 G BON *D cline nd F ll* 21c 24a 88d 90d 158d 159 601b d 627d 630a pas im esp 627d 628b 633 634a
41 G ON *De li a d Fall* 161 162b 225 b 298a 300 p 300a b 326b-328 c 347a c 451c 453 c 522b 528a c esp 523a b 527d 528a
42 K T *Pure Re son* 222a c / *Judgement* 504 b 586a 587a
43 MILL *Liberty* 274b-302 311d 312a / *Rep e sentat ve Government* 336c 341d passim 346c 348c pass m 387c d / *Utilitar an sm* 452 b
44 BOS ELL *Johnson* 211b c 297b 307c d 380d 381 512d 513a
45 L VOISIER *Elements of Chemistry* PA T I 33a
46 HEG L *Ph l sophy of Right* PART III P r 247 78a b / *Philosophy f History* 153 369a c esp INTRO 182b c 185a 186 PART I 217c 219c 235d 236a 248a c 251a b 253b c PART II 277d 278a PART III 300d 301a PART IV 318a 346c 348 351b 353a 361a 362b
47 GOETHE *Faust* PART I [570-573] 16a
49 D RWIN *Descent of Man* 320a 330a c esp 323a 324b 327b 330a c 596c
51 TOL TOY *War and Peace* BK V 196b BK XI 498b d EPILOGUE II 695d 696d
54 FR UD *P ycho Analytic Therapy* 125d 126 / *C i l zation a d Its Discontents* 776d 780b 781a d 801c 802a c / *Ne v Introductory Lec t s* 849d

6a Progress in the arts

5 A SCHYLUS *Prometheus Bound* [442-506] 44c 45a
6 HE ODOTUS *H story* BK II 49d 50a
6 THUCYDID S *P loponnesian War* BK I 350b 351a
7 PLATO *C itias* 479 d / *Stat sman* 601b 603a / *Laws* K I 654c 655b
8 A STOTLE *Sophistical Refutations* CH 34 [183b16-184b8] 253 d / *Metaphys s* K I CH [981b13-24] 500a BK X I CH 8 [74b8-13] 605a
9 AR TOTLE *Eth cs* BK CH 7 [098a2 25] 343 d / *Pol t c* BK I CH 8 [68b35 38] 464d / *Rh tor* K III H I [1403b15 1404 39] 653b d 654c / *P t* CH 4-5 682c 684
10 HIPPO R TES *A cient Med ci e* par 1-4 1 2c p r 1 4b
12 LUC T US *N t e of Th gs* BK V [330-337] 65b c [9 5 116] 73b 76b [124 1457] 77b 80a c
13 VIRGIL *G rgi s* I [121 146] 40b 41a
14 PLUT RCH *Mar llu* 252a 255a
18 AUGUS N *C ty f God* BK XX CH 4 610a c
19 AQU NAS *Summa The logic* PART I Q 46 2 R 4 253 255a
23 HO S *Le iathan* PART 85c PART II 153d RT V 267c 269b p m
24 RAB LA *G ga tua and Pa t gruel* BK I 81d 82b
30 BACON *N vum O g num* BK I APH 85 121d 122d APH 9 134d 135d
31 D SCARTES *Di co* P RT VI 61a c
36 SWIFT *Gull ver* PART II 103b 115b esp 106 107
36 STE N *Trist m Sh ndy* 224b 225a
38 RO S U *I eq al ty* 336 337 338d 339 339d 342 346d 347a 348d 353 365b-366b
39 SM TH *W alth f Nati ns* BK IV 190d 191a K V 308 309 c

(6 *Intellectual or cultural progress: its sources and impediments 6a Progress in the arts*)

40 Gibbon *Decline and Fall* 18b 24a c 158d 159a 171c 237d 238b 633c 634a c
41 Gibbon *Decline and Fall* 291d 292c 327a 328a c 451d 452a 509d 510a c
42 Kant *Judgement* 586a 587a
43 Constitution of the U S article i sect 8 [14–217] 13b
43 Federalist number 43 139d 140a
44 Boswell *Johnson* 70d 71b 195d 406c
46 Hegel *Philosophy of Right* art i par 69 30b / *Philosophy of History* intro 182b c 185a 186a part i 229b d 247c 248d 251a b 253b c part ii 261b 267b 268b 276a d part iii 312 d part iv 323c d 335a 336c 346c 348a
49 Darwin *Origin of Species* 13c / *Descent of Man* 278a 279a 320 321a passim 329a 330a 349b d
50 Marx *Capital* 86b
50 Marx Engels *Communist Manifesto* 420d 421a 421d
53 James *Psychology* 727b
54 Freud *Civilization and Its Discontents* 777a c 778b 779b

6b Progress in philosophy and in the sciences

7 Plato *Statesman* 601b 603
8 Aristotle *Sophistical Refutations* ch 34 [183b16 184b8] 253a d
9 Aristotle *Parts of Animals* bk i ch i [642 25 3] 165b / *Generation of Animals* bk v ch i [778b7–10] 320d / *Ethics* bk i ch 7 [1098 25] 343c d
10 Galen *Natural Faculties* bk i ch 8 193b bk iii ch 10 207b d
12 Lucretius *Nature of Things* bk i [62 79] 1d 2a [11 4 1 17] 14d bk ii [30] 30 b bk v [1 54] 61a d [448 1451] 79d 80a bk vi [1 4] 80a d
12 Epictetus *Discourses* bk iii ch 6 181d 182a
18 Augustine *City of God* bk xxi ch 24 610a
20 Aquinas *Summa Theologica* part i ii q 97 a i ans 236a d
23 Hobbes *Leviathan* part ii 153d 164a c part v 258c 267c 269b
24 Rabelais *Gargantua and Pantagruel* bk ii 81d 82b
25 Montaigne *Essays* 271b c 276b 279c
28 Harvey *Motion of the Heart* 285b c / *On Animal Generation* 336d 337a c 433c
30 Bacon *Advancement of Learning* 2b c 14 15a 18b 29b c 30d 31 32a c 33b d 34b 51d 53d / *Novum Organum* bk i aph 30–31 109a aph 110–115 116b 130d
31 Descartes *Rules* iv 5 7d / *Discourse* 41a 67a c esp part iv 1 51b 67a c
33 Pascal *Vacuum* 355a 358b
35 Locke *Human Understanding* 88d 89c
35 Berkeley *Human Knowledge* intro sect 17 409d 410a
35 Hume *Human Understanding* sect i div 5 453a b div 8 9 454b 455a sect vii div 48 471b c sect x div 94 492d 493a
36 Swift *Gulliver* part iii 118a 119a
36 Sterne *Tristram Shandy* 224b 225a
38 Rousseau *Inequality* 337d 342c 346d 347a
39 Smith *Wealth of Nations* bk v 335b 337b esp 337a b
40 Gibbon *Decline and Fall* 148a b 158d 159d 601b c 658b c
41 Gibbon *Decline and Fall* 298 300a 326b 327d 452a b 509d 510a c
42 Kant *Pure Reason* 1d 2b [fn 2] 5a 8b 248d 250a c / *Practical Reason* 299d 317b 318b 335b c 336d 337a c 339b c / *Judgement* 513d 514b 586a 587a
43 Constitution of the U S article i sect 8 [214 217] 13b
43 Federalist number 9 47c d number 43 139d 140a
43 Mill *Liberty* 287c 288a / *Utilitarianism* 445a 447b passim 452a b
45 Lavoisier *Elements of Chemistry* pref 7c
45 Fourier *Theory of Heat* 173a 175b
45 Faraday *Researches in Electricity* 391b c
46 Hegel *Philosophy of Right* additions 136 138c d / *Philosophy of History* intr 185 186a part i 217c 219c 229b d 251a b 253b c part iii 312c d part iv 323 d 335a b 343d 344a 346c 348a 361 362b
48 Melville *Moby Dick* 105b 204a
49 Darwin *Descent of Man* 590a
50 Marx *Capital* 170b c
51 Tolstoy *War and Peace* bk xi 469a d bk xii 563 b epilogue ii 694d 696d
53 James *Psychology* 37b 125b 127b passim
54 Freud *Psycho-Analytic Therapy* 123a 127 c passim / *Interpretation of Dreams* 137b 139 esp 138d 139a / *Civilization and Its Discontents* 777a c / *New Introductory Lectures* 880d 881c

6c The use and criticism of the intellectual tradition: the sifting of truth from error; the reaction against the authority of the past

6 Thucydides *Peloponnesian War* bk i 353d 354b
7 Plato *Phaedo* 240d 242b / *Sophist* 564d 569a
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The religious aspects of optimism and pessimism *see* GOD 7h 8e 9f HISTORY 5a PROPHECY 4c-4d

The notion of progress in the theory of biological evolution *see* EVOLUTION 4d

Other discussions of the myth of a golden age *see* LABOR 1a MAN 9a TIME 8b

Discussions relevant to the theme of economic progress *see* LABOR 4a 5a-5d 7c(2) LIBERTY 6b REVOLUTION 4a 5c SLAVERY 3c 5b WEALTH 9b 12

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Attitudes toward change which have a bearing on progress *see* CHANGE 12b CUSTOM AND CONVENTION 8 TIME 7

Evidences of progress in the arts and sciences and for the comparative progress of different fields of learning *see* ART 12 KNOWLEDGE 10 PHILOSOPHY 7

The conditions on which intellectual progress depends *see* KNOWLEDGE 9b LANGUAGE 6 OPINION 5b SCIENCE 6a-6b SIGN AND SYMBOL 4c TRUTH 6 8d

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World* but relevant to the idea and topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collection
II Works by authors not represented in this collection

For the date place and other facts concerning the publication of the works cited consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*

I

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Chapter 72 PROPHECY

INTRODUCTION

THE name of prophet signifies throughout a great part of the western tradition an emin nce and dignity not shared by the scien tist the philosopher the statesman or even the sage The soothsayer and the seer in pagan antiq uity and the prophet of the Lord in Israel do not claim to speak from a merely human wis dom or to declare truths they have learned by inquiry or reflection Nor are their utterances concerned with the nature of things The proph et claims to know what men cannot know by any exercise of human powers He enjoys spe cial gifts He is divinely inspired He is in structed by God or has in some way been ad mitted to the secrets of the gods His knowl edge is not only of supernatural origin it deals with supernatural matters

Prophecy is more than a prediction of the future It unveils what Fate holds in store for men it foretells the course of providence In most cases the future predicted has deep moral significance express ng the pleasure or displeas ure of the gods with individuals or nations or manifesting God s justice in the rewards prom ised those who keep His commandments and the punishments awaiting those who break them The prophet s foresight discerns more than the future it discovers what men can hope for or must fear according to th ir merits not in the eyes of men but in the sight of God

This understanding of prophecy seems to be involved in the major issues which the *great* books raise about prophets For example the problem of distinguishing between *true* and false prophets goes beyond the mere truth or falsity of a prophet s utterances to the *validity* of his claim to special sources of knowledge or a supernaturally inspired understanding of dreams and visions omens and portents The false proph et is not like the mistaken scientist or ph los opher—just a person in error He is either a deceiving impostor or a self deceived victim of his own pathology

Similarly the Christian theologians who criticize the pagan cult of oracles and all forms of divination which seek to pry into divine mysteries seem to imply that the seers and soothsayers of Greece and Rome unlike the Hebrew prophets did not have the gift of prophecy The acceptance or rej ction of prophets and of ways of foreseeing what has been planned in Heaven cannot it se ms be separated from a whole system of religious be liefs In this respect prophets are like miracles Without faith both are incredible Th re be two marks writes Hobbes by which to gether not asunder a true Prophet is to be known One is the doing of miracles the other is the not teaching any other religion than that which is already established In Hobbes view that there be a religion already established among a people is the one indispensable condi tion for their reception of prophets or their ex perience of miracles

Issues concerning prophecy may therefore occur within a single religious community or be relative to differences between rel gious communities as for example the opposition between the Jewish and Christian interpreta tion of the messianic prophecies in the Old Testament Necessarily then there is an issue between the unbelievers and the religious of any faith Those who deny the exis ence of God or the gods or divine agency in the tem poral affairs of men and certainly those who deny the credentials of revelation cannot but regard prophets as misled and misleading a d those who accept prophecy as gullibl or su perstitious In the pagan tradition a philoso pher like Aristotle may however be cri val of divination and an historian like Thucydides may cast doubt on oracles without discredit

ing all other religious beliefs or being them selves atheists

Some who reject religious prophecy do not concede that man s natural desire to peer into the future need be completely balked But the secular substitutes for religious prophecy ap pear to alter the meaning of prophecy Scientific predictions of the future of the world or of life on this planet (as for example those which occur in the writings of Lucretius or Darwin) may be accompanied by attributions of moral qualities to Nature but usually they connote Nature s sublime indifference to man s welfare They are seldom if ever read as promises or threats of what man deserves to have befall him

Similarly historians turned prophets or philosophers of history who like Spengler prophesy decline and doom do not exhort men to avert disaster as do the prophets of the Old Testament Nor do those who like Hegel and Marx foresee the ultimate goal toward which events inevitably march urge men to prepare themselves for it as do the prophecies of the New Testament which speak of the second coming of Christ Secular prophecies which bespeak the inevitable operation of necessary causes are in this respect like pagan previsions of Fate At most they leave man only the illusion of free cho ce Jewish and Christian prophecy in contrast addresses man as a re sponsible agent who even when he knows something of God s will remains free to will good or evil for himself If according to the theologians divine providence or predestina tion does not abolish human freedom neither does p ophetic knowledge of the divine plan

These matters are discussed elsewhere—sec ular prophecy in the chapters on HISTORY and PROGRESS and the problem of foreknowledge and f eedom in the chapters on FATE and NECESSITY AND CONTINGENCY

IN PAGAN ANTIQUITY prophecy does not seem to be confined to me i especially appointed by the gods The gods themselves foretell the future to men When people wish to know the future they go or send emissaries to the temple at Delphi over which a goddess, the Pythoness, presides The institut on of the oracles of which Delphi is perhaps the mo t illustrious example leaves foresight in the hands of the gods for as most of the anecdotes in Herodo tus and Thucydides show only the Pythoness herself knows unequivocally the meaning of her oracular utterances

To men is left the task of interpreting what the oracle means The pagan unlike the Hebrew prophet seems to be a man of skill in penetrat ing the secrets of the gods—a skill which may itself be divinely bestowed—but he is not a man to whom the gods have spoken plainly so that he may in turn unerringly advise others No man when in his wits according to Plato attains prophetic truth and inspiration

There are passages in the Greek poets and historians which seem to suggest that the gods begrudge men too clear a vision of the future and may even on occasion mislead them or at least permit them to be misled In Aeschylus play Prometheus declares that because he gave to men gifts claimed by the gods he is bound in durance here He gave them radiant fire the mechanical arts he took from men the expectancy of Death he gave them medi cines and healing drugs Last in his o vn enu meration and in a sense most significant he en dowed men with the divine gift of foresight

I drew clear lines for divination Prome theus says and d scerned (before all others) what from dreams is sure to come to pass in waking I disclosed the mysteries of omen bringing words and pathway tokens and made plain the flight of taloned birds both of good augury and adverse I cleared the way for mortals to an art hard of d scernment and made bright and clear fire-auguries heretofore obscure and blind The chorus questions whether the power of creatures creeping for an hour shall by wisdom overpass the bounds set for their little lives by the mind of Zeus Does the wisdom of foreknowledge gained through the arts of divination give men strength to resist the will of the gods or to struggle against them?

Prometheus himself is the answer to the question The power he wields over Zeus which Zeus tries to wrest from him by bribes and threats and by the infliction of titanic pa n is the foreknowledge wh ch P ometheus possesses of the doom to befall the so i of K onos No threat of Zeus will get him to divulge its

Prometheus says because nought can surprise me who foreknow Nought in his power shall bend me to reveal whom Fate prepares to work his overthrow

A myth which Socrates relates in the *Gorgias* appears to contain a sequel to the legend as told by Aeschylus It also seems to confirm the point that foresight is a divine privilege in which men should not share lest they become too god like According to the myth Zeus in order to prevent men from evading the divine judgment says In the first place I will deprive men of the foreknowledge of death this power which they have Prometheus has already received my orders to take from them

The oracles never make the future so plain that men can act with a foreknowledge equal to that possessed by the gods but sometimes oracular utterances seem to be contrived not merely to veil the future but to lead men astray Herodotus tells the story of Miltiades who on the advice of Timo a priestess of the goddesses of the underworld acted in a way which brought him to grief When the Parians sent to Delphi to ask whether Timo should be punished for this the Pythoness forbade them saying Timo was not at fault twas decreed that Miltiades should come to an unhappy end and she was sent to lure him to his destruction

There is also the story told by Thucydides of Cylon who inquiring at Delphi was told to seize the Acropolis of Athens on the grand festival of Zeus This too turned into a disastrous misadventure apparently because as Thucydides observes whether the grand festival that was meant was in Attica or elsewhere was a question he never thought of and which the oracle did not offer to solve

For the most part however the calamities which befall men who seek guidance from the oracle seem to be due to their own misinterpretation of the Delphic deliverance itself always admittedly difficult to understand Herodotus and Thucydides abound with such stories and also with instances in which the same oracular statement is given conflicting interpretations one of which must be wrong Nevertheless Herodotus declares himself unwilling to say that there is no truth in prophecies and he is certainly not willing to question those which speak with clearness Giving an example of a clear prediction he adds When I look to this and perceive how clearly Bacis spoke I neither venture myself to say anything against prophecies nor do I approve of others impugning them

Thucydides appears to take a contrary view He singles out one example as an instance of faith in oracles being for once justified by the event He puts into the speech of the Athenians at the Melian Conference the warning not to be like the vulgar who abandoning such security as human means may still afford when visible hopes fail them in extremity turn to invisible to prophecies and oracles and other such inventions that delude men with hopes to their destruction

The problem of the reliability of prophecies, and of the faith or credulity of those who rely upon them applies not only to oracles but also to dreams or visions and to omens and portents of all sorts Two stories about Croesus told by Herodotus show that oracles and dreams can be equally ambiguous and are equally liable to misinterpretation Croesus dreamed that his son Atys would die by the blow of an iron weapon Subsequently when Atys wished to go boar hunting with Adrastus he persuaded Croesus that the dream could not have been a warning against this undertaking because a boar does not have hands to strike with nor does it wield iron weapons But during the hunt Atys was killed by the spear which Adrastus intended for the boar

On another occasion Croesus inquired of Delphi how long his kingdom would last The Pythoness answered in effect until a mule is monarch in Media Thus not only pleased him because it seemed incredible to him that a mule should ever become king of the Medes but also gave him confidence when he engaged in war with the Medes and Persians led by Cyrus The war ended in his defeat and capture but according to Herodotus he had no right to complain of the oracle because he had misunderstood the answer which had been given him about the mule Cyrus was that mule for the parents of Cyrus were of different races and of different kinds —his mother a Median princess his father a Persian subject

The attitude of the ancients toward these

various instruments of prophecy or divination does not seem to be consistent or constant Herodotus reports at one place how Xerxes despising the omens carried out his plans against their forebodings and at another how an eclipse of the moon being interpreted as of good omen rejoiced Xerxes who thus in structed proceeded on his way with great gladness of heart And again when Xerxes re ports to Artabanus the advice—concerning his war against the Greeks—which he received from a dream apparition Artabanus scoffs say ing Such things my son have of truth noth ing divine in them Whatever a man has been thinking of during the day is wont to hover round him in the visions of his dreams at ni ht But when Artabanus himself experi ences the same apparition which had occurred to Xerxes in his dream and in addition to giving the same advice the vision threatens him Artabanus changes his mind about dreams and reverses his policy with regard to the expedition a ainst Greece

As to the divination which takes place in sleep and is said to be based on dreams Aristotle writes we cannot lightly either dis miss it with contempt or give it implicit con fidence Nevertheless he himself seems to con clude that most so called prophetic dreams are to be classed as mere coincidences and that dreams are not sent by God nor are they de signed for this purpose *i e* foretelling the future One proof that they are not sent by God is in his opinion the fact that the persons having them are not the best and wisest but merely commonplace persons The fact that the power of foreseeing the future and of having vivid dreams is found in persons of in ferior type implies that God does not send them

THE CHRISTIAN THEOLOGIANS d stinguishing between prophecy and divination condemn the latter as a kind of presumption or impiety Though their criticism seems to be directed especially against astrology it applies to the in terpretat on of terrestrial as well as celestial s gns Augustine refers to the lying divina tions and impious dotages of the astrologers and Aquinas explains how the a trologers are able to foretell things in a general way without attributing to them any genuinely prophetic power

In his consideration of the difference between true and false religion Hobbes goes further than the theologians in condemning the in numerable other superstitious ways of divina tion such as the ambiguous or senseless an swers of the priests at Delphi Delos Ammon and other famous oracles or the prediction of witches that pretended conference with the dead which is called necromancy conjuring and witchcraft and is but juggling and con federate knavery or in general the recourse to omens portents and dreams for purposes of prognostication

That the things Hobbes calls superstitious are not confined to pagan antiquity is manifest in Shakespeare s *Macbeth* The witches and the omens there are like the soothsayers and the portents in *Julius Caesar* and Macbeth s mis understanding of til Birnam Forest come to Dunsinane is as fatal as Croesus reliance on until a mule is monarch in Media

In one other respect pagan and Christian cultures seem to exhibit a certain parallelism with regard to the belief in supernatural fore knowledge The spirits of the departed in the *Odyssey* and the *Aeneid* are able to inform the visitor to the underworld of coming events on earth They speak plainly and with perfect prescience The veil which hides the future from mortal eyes has been lifted So too the damned souls and the blessed foretell future things to Dante no less accurately though less extensively than in *Paradise Lost* the arch angel Michael unfolds to Adam the whole fu ture history of mankind

But so far as the foreknowledge of mortal men is concerned the Hebrew p ophets seem to be unique Unlike pagan d viners or sooth sayers they do not probe the future in order to help men anticipate the turns of fortune or the lines of fate They do not have to employ arts or devices for penetrating divine secrets God speaks to them directly and through them to the Chosen People For the most part their prophetic speeches unlike those of the oracles seem to be unamb guous At lea t the intention se ms to be to re eal not to conceal God s plan on such matt s a He Himself wishes men to foresee the course of providence

Where pagan prognosticators may claim to be divinely inspired in the sense of having special powers of interpretation the Hebrew prophets speak from a different kind of super natural inspiration They are the vessels through which the Lord Himself speaks They are interpreters only in that they make known to others what God has made known to them

The content of the divine communication is seldom exclusively a foretelling of the future It is often accompanied by instruction concerning the actions to be performed by the Jewish peo ple—the direction of their conduct toward the Promised Land or the rebuilding of the Temple Sometimes when the prophecy is one of doom rather than of hope as in the case of the de struction of Jerusalem the Babylonian captiv ity or the dispersion of Israel the prediction of the future is accompanied by moral instruction of another sort—the lessons of the Law which the Jews have forsaken meriting thereby the punishments the prophets foresee

Mere prognostication does not seem to be the chief purpose of Hebrew prophecy Just as the Covenant which God makes with Abraham Isaac and Jacob consecrates the Jewish people to a special mission just as the Law which God hands down through Moses sets them apart from the Gentiles and prescribes for them the way of righteousness and sanctity so the reve lations of God s providence throu_h the proph ets tend to remind the Chosen People of the meaning of the Covenant and the Law as well as to d sclose their destiny as a nation

The prophets speak not only of the future but of the present and the past They are di vinely appointed teachers no less than the patriarchs and Moses Yet they may rank below Moses (who is sometimes also regarded as a prophet) by reason of the manner in which they are addressed by God As Hobbes points out God himself in express words declareth that to other prophets he spake in dreams and vi sions but to his servant Moses in such manner as a man speaketh to his friend —face to face

The content of Hebrew prophecy in short seems to be continuous with the rest of God s revelation of Himself to His Chosen People The difference between the prophets as the in struments of God s teaching and the pagan philosophers as merely human teachers seems to Augustine plainly shown by the a reement of the prophets with one another and by their continuity with Moses and the patriarchs whereas Augustine can find nothing but dis greement and dissension among even the best teachers of the pagans Among them false teachers or prophets seem to be accorded the same recognition and to attract the same fol lowing as true

But that nation Augustine writes that people that city that republic these Israelites, to whom the oracles of God were entrusted by no means confounded with similar licence false prophets with the true prophets but, agreeing together and differing in nothing acknowledged and upheld the authentic au thors of their sacred books These were th ir philosophers these were their sa es divines, prophets and teachers of probity and pi ty Whoever was wise and lived according to them was wise and lived not according to men but according to God who hath spoken to them

Hobbes also conceives the prophets of the Old Testament as more than foretellers of the future The name of prophet he writes sig nifies in Scripture sometimes *prolocutor* that is he that speaketh from God to man or from man to God and sometimes *predictor* or a fore teller of things to come In addition to their being divinely appointed teachers the proph ets according to Hobbes seem to perform a political function They check the power of the kings or seek to awaken their consciences to the dictates of justice and mercy Throu h the whole history of the kings as well of Judah as of Israel there were prophets that always con trolled the kings for transgressing the religion and sometimes also for errors of state

A secular view of the Hebrew prophets seems to give prominence to their political role in the theocratic community of the Jews Comparing the Jewish state with other sacerdotal societies, Mill observes that neither their kings nor their priests ever obtained as in those other coun tries the exclusive moulding of their character Their religion gave existence to an inestima bly precious unorganized institution—the Or der (if it may be so termed) of the Prophets Under the protection generally though not al ways effectual of their sacred character the Prophets were a power in the nation often

more than a match for kings and priests and kept up in that little corner of the earth the antagonism of influences which is the only real security for continued progress

AS THERE IS A BODY of prophetic doctrine in the Old Testament so the religion of the Gospels contains a number of prophetic beliefs peculiar to Christian doctrine Such for example is the prophecy of the second coming of Christ the prophecy of the Last Judgment on that occasion and the prophecy of a final conflagration to cleanse the world which will precede the resurrection of the body as that in turn precedes the general judgment of souls

Aquinas discusses the various signs which will foretell the imminence of these events He also raises the question whether the time of the end of the world and of the resurrection can be known exactly On this he agrees with Augustine that that time is hidden from men It cannot be calculated by natural reason nor is it revealed Of that day and hour it is written in Matthew no one knoweth no not the angels of heaven When the apostles asked Christ about His second coming He answered according to Saint Paul It is not for you to know the times or moments which the Father hath put in His own power

What Christ refused to tell the apostles Aquinas adds, He will not reveal to others Wherefore all those who have been misled to reckon the aforesaid time have so far proved to be untruthful for some as Augustine says stated from our Lord s ascension to His last coming 400 years would elapse others 500 others 1 000 The falseness of these calculators is evident as will likewise be the falseness of those who even now cease not to calculate

The single greatest prophecy in the Judaeo-Christian tradition is perhaps the messianic prophecy—the foretelling of a Messiah or of a messianic age The prediction of a Messiah or Saviour who shall be born of the house of David and shall be king of the Jews runs throughout the prophetic books of the Old Testament though with different degrees of explicitness and varying imagery in Daniel and Jeremiah in Isaiah and Ezekiel

The Lord himself shall give you a sign says Isaiah Behold a virgin shall conceive and bear a son and shall call his name Immanuel For unto us a child is born unto us a son is given Isaiah goes on and the government shall be upon his shoulder and his name shall be called Wonderful Counsellor The mighty God The Everlasting Father The Prince of Peace Of the increase of his government and peace there shall be no end upon the throne of David and upon his kingdom to order it and to establish it with justice from henceforth even for ever And Jeremiah tells his people Behold the days come saith the Lord that I will raise unto David a righteous Branch and a King shall reign and prosper and shall execute judgment and justice in the earth In his days Judah shall be saved and Israel shall dwell safely

Two of the great issues between the Jewish and Christian faiths concern these messianic prophecies in the Old Testament One arises from opposite interpretations of the event predicted—a messianic age in which the kingdom of the Jews will be established on earth in perpetual righteousness and glory or the coming to earth of God s only begotten son incarnate in human form for the salvation of all mankind The other arises from opposite answers to the question whether the prediction—on either interpretation—has been fulfilled

It is of course the Christian view that the prophets foretold the coming of Christ and that their prophecy has been fulfilled But more than that Christian apologists and theologians seem to make the fulfillment of Hebrew prophecies interpreted as foreshadowing the truths of the Christian religion a source of verification for these truths

The difference between Jesus Christ and Mahomet according to Pascal is that Mahomet was not foretold Jesus Christ was foretold I see many contradictory religions and consequently all false save one he writes Each wants to be believed on its own authority and threatens unbelievers I do not therefore believe them Everyone can say this everyone can call himself a prophet But I see the Christian religion wherein prophecies are fulfilled and that is what everyone cannot do

And in another place Pascal declares that the prophecies are the strongest proof of Jesus Christ If one man alone had made a book of predictions about Jesus Christ as to the time

and manner and Jesus Christ had come in conformity to these prophecies this fact would have infinite weight But there is much more here Here *is a succession of* men during four thousand years who consequently and without variation come one after another to foretell this same event

Centuries earlier Augustine writes in a similar vein The Hebrew people as a whole are chosen to perform this prophetic function—to foretell sometimes through men who understood what they spake and sometimes through men who understood not all that has transpired since the advent of Christ until now and all that will transpire Not only the explicit prophecies which are contained in words, but all the rituals and ceremonies the offices and institutions of the Jewish religion prefigure Christianity signifying and fore-announcing those things which we who believe in Jesus Christ unto eternal life believe to have been fulfilled or behold in process of fulfillment or confidently believe shall yet be fulfilled

OUTLINE OF TOPICS

REFERENCES

T find the passages cited use the numbers in heavy type which are the volume and pa e numbers of the passage refer ed to Fo xample in 4 Ho ER *Il d* BK II [265 83] 12d the number 4 is the number of the volume in the set the number 12d indicates that the pas sa e is in section d of page 12

PAGE SECTIONS When the text is pr nted in one column the letters a and b refer to the upper and lower hal es of the page F xample in 53 J ES *Psychology* 116a 119b the passage begins in the upper half of pa 116 and ends in the lower half of page 119 When th text is p inted in two columns the letters a and b efer to the upper and lower halves of the left h nds de of the pa e the letters and d to the upper and lower halves of the right hand s le of the p ge For example in 7 P ATO *Symposi um* 163b 164c the passag begins in the lower half of the left hand s de of pa e 163 and ends in the upper half f the ht ha d side of pag 164

AUTHOR D SIONS One or more of the main divisio s of a v ork (s ch as PART K CH s CT) are som t mes ncluded in the reference line numbers in brackets are given in cer tain cases *e g Il ad* BK I [265 83] 12d

BIBL REF RENCES Th references are to book chapt r and erse When the King James and Douay versions d ffer in titl of book or in the numbering of chapters or verses the King James vers on cited first and the Douay indicated by a (*D*) follow *e g* OLD TEST MENT *N hem ah* 7 45—(*D*) *II Esdras* 7 46

SYMBOL The abb e iatio i esp c lls the reader s attention to o ie or more especially relevant parts f a whole r ference pass m signifies th t the t pic is discussed ntermit tently rather than ontinuo sly in the wo k or pas age c ted

For additional info mat n con rning the style of the ref ence see the Explanatio of Reference Style for gene al guidance in the use of *The Gre t Id a* consult the Preface

1 The nature and power of p ophecy

1*a* Prophecy s the ead ng of f te the fore-tell ng of fortune the beholding of the future

4 Ho *Il d* BK XVI [843 861] 121c BK XVI [94 137] 131a-c BK XXII [355 366] 159a / *Odyssey* K X [487-540] 241a BK XI [90- 37] 244a c BK XIV [321 336] 263b-c BK X X [291 307] 292b

5 A SCHYLUS *Pers ans* [739-842] 23a 24b / *Seven 4g in t Thebes* [1 38] 27a / *Prome the s B u d* [88 114] 41 b [9 7-94] 49d 0a / *Ag mem n* [104 159] 53a d [248 2 4] 54d [7 342] 63c 66b

5 SOPHOC E *O d pus th King* [3 0-512] 102a 103d / *O d pus t Colo us* [348 555] 126c-128b / *A t g ne* [988- 114] 139c 140 / *Ajax* [745 ,83] 149c-d / *T ch n ae* [155 177] 171 [82 -83] 177b / *Ph l ctet s* [604-6 9] 187c [1326- 347] 194a [4 8 444] 194d 195 c

5 EURI IDES *Trojan W men* [3 8 46] 272d 273a / *Electr* [1233 1359] 338b 339 / *Phoen cia Ma dens* [834 1 8] 385c 387b / *Iph genia Am ng th Ta* [1234 83] 422b c

6 HERODOTUS *Hi t ry* BK I 12b-d BK II 77a b BK V 189a b 190c d 199d 201a 201d 202 204b-c BK VII 223b-c 227a 239 240d 248b c 255c d BK VIII 263b c 268b d 270c 271a 273b c 276d 277a BK X 308a c

7 PLATO *Pha d us* 123b d / *Symp sium* 153a b 156d 157a / *Ap logy* 210d 211a / *Go g* 292b d / *Tima us* 466d 467c

9 AR TOTL *Rhet ic* BK I CH 15 [375^b35 1376^a2] 620c

12 EP CT US *Di cou es* K I CH 17 123b 124a

13 V RGIL *Eclo u s* V 14a 15b / *A n id* BK I [223 304] 109 111a BK VIII [6 8-73] 275a 278b

14 PLU A H *R mulu* 20b c / *N ma Pon p l iu* 52b / *P plicol* 82a b / *Pericl* 123c 124 / *F b u* 141d 142 / *M ll s* 259c 260 / *S ll* 371d 372 / *Lucullus* 404d 405a / *Ca s* 601c 602a / *Tiberius Gr chus* 679a 680b / *Dem sth es* 698b-699a

18 AUG I TIN *City of God* BK XIX CH 22 525b-

23 HO ES *Lev ath n* PART III 183b d

27 SHAK E E *Macb th* A T I SC 285b 287b AC IV S 1 300b 302b ACT V V [9- 2] 310a b / *Cymb l n* AC V C V [4 6-475] 488b d

40 G BON *D l a d Fall* 56b

46 H G L *Ph los phy of History* PART I 217b-c

(1 *The nature and power of prophecy* 1a *Prophecy as the reading of fate the foretelling of fortune the beholding of the future*)

47 GOETHE *Faust* PART II [8094 8133] 197a 198a

48 MELVILLE *Moby Dick* 364b 365a 415a 418a

54 FREUD *New Introductory Lectures* 822b 825c

1b Prophecy as supernaturally inspired foresight into the course of providence

OLD TESTAMENT *Exodus* 4 10 17 / *Numbers* 11 16 17 24 30 12 1-9 22 35 23 26 passim / *Deuteronomy* 18 18 / *I Samuel* 10 1 13 28 5 20-(D) *I Kings* 10 1 13 28 15 20 / *II Samuel* 7 4 16-(D) *II Kings* 7 4 16 / *I Kings* 13 1 2 32 14 1 16 16 1 4 17 13 16 19 15 18 20 13 14 22 28 35 42 21 17-24 28 29-(D) *III Kings* 13 1 2 32 14 1 16 16 1 4 17 13 16 19 15 18 20 13 14 22 28 35 42 21 17 24 28 29 / *II Kings* 1 2 7 1 2 7 0 8 1 7 15 9 30-10 17 19 1 7 20 21 28 33 37 20 1-6 14 19 22 14 20-(D) *IV Kings* 1 2 7 2 17 20 8 1 7 15 9 30-10 17 19 1 7 20-21 28 33 37 20 1-6 14 19 22 14 20 / *I Chronicles* 17 7 15-(D) *I Paralipomenon* 17 7 15 / *II Chronicles* 15 -8 18 4 16 31 34 20 4 16 37 21 12 20 34 22 8 36 15 3-(D) *II Paralipomenon* 15 1-8 18 4 16 3 34 20 14-16 37 21 12 20 34 22 28 36 15 23 / *Isaiah* passim esp 46 9 10-(D) *Isaias* passim esp 46 9 10 / *Jeremiah* passim esp 1 7 25 6-(D) *Jeremias* passim esp 1 7 25 26 / *Ezekiel* 1-39 passim-(D) *Ezechiel* 1 39 passim / *Daniel* 2 esp 36-45 4 4-8 24 37 5 25 31 7-8 9 20 27 11 12-(D) *Daniel* 2 esp 2 36-45 4 1 4 21 34 5 25 31 7-8 9 20-27 1 12 / *Hosea* passim-(D) *Osee* passim / *Joel* 3 esp 2 28 29 / *Amos* passim esp 3 7-8 / *Jonah* 3-(D) *Jonas* 3 / *Micah* passim-(D) *Micheas* passim / *Nahum* passim / *Habakkuk* passim-(D) *Habacuc* passim / *Zephaniah* passim-(D) *Sophonias* passim / *Haggai* 2-(D) *Aggeus* 2 / *Zechariah* passim esp 8 9-(D) *Zacharias* passim esp 8 9 / *Malachi* passim-(D) *Malachias* passim

APOCRYPHA *Ecclesiasticus* 42 19 48 22 25-(D) OT *Ecclesiasticus* 42 18 19 48 25 8

NEW TESTAMENT *Matthew* 2 3-6 3 1 3 10 18-20 / *Mark* 1 7-8 6 1 4 / *Luke* 1 67-79 2 25 26 4 22 24 16 14 16 / *John* 1 6-8 15 27 8 51 53 / *Acts* 2 17 18 3 20 24 19 1 7 / *Ephesians* 2 9-22 3 3-6 / *II Peter* 1 19-21

7 PLATO *Timaeus* 467b-c

8 ARISTOTLE *Prophesying* CH 1 [462[b] 0- 6] 707a b CH 2 [463[b]11 23] 708 b [464 19 3] 708d

18 AUGUSTINE *Confessions* BK X par 25 95a / *City of God* BK VII CH 3 261b BK X CH 25 313c 314c BK XI CH 4 324a d BK XIX CH 22 525b-c

19 AQUINAS *Summa Theologica* PART I Q 1 A 11 ANS 59d 60d A 13 ANS 61c-62b Q 5 A 3 REP 1 297b 298a

20 AQUINAS *Summa Theologica* PART III Q 7 A 8 ANS and REP 2 750d 751d Q 6 A 1 REP 1 845b 846a

21 DANTE *Divine Comedy* HELL XV [1-99] 21a 22a PURGATORY XXII [55-93] 87a c XXIV [76-93] 90c XXXIII [22-90] 104b 105a PARADISE IX 118c 120a esp [61-63] 119b XII 132a 133c XXVII [10-66] 147b-148a [121 148] 148c d

23 HOBBES *Leviathan* PART I 53d PART II 149c d PART III 173c 176d 177b 183d 186b passim

32 MILTON *Christs Nativity* [1 7] 1a / *Paradise Lost* BK III [183 193] 139b BK XI XII 299a 333a esp BK XI [656 775] 313b 316a [802 834] 316b 317b BK XII [235 248] 324b [315 330] 326a b

35 HUME *Human Understanding* SECT X DIV 101 497a b

40 GIBBON *Decline and Fall* 189b-c

1c Prophecy as the instrument of providence: prophets as moral teachers and political reformers

OLD TESTAMENT *Exodus* 3 6-15 4 10-17 6 13 28-30 7 12 passim 24 31 18 34 1 4 / *Numbers* 11 11 17 / *Deuteronomy* 4 14 9 7 11 passim 18 15 19 28 30 / *Joshua* 3-8 4 14 23 24-(D) *Josue* 3 7-8 4 14 23 24 / *Judges* 6 7 10 / *I Samuel* 2 27 36 8 0-18 22 10 1-8 12 6-25 13 11 14 15 1-(D) *I Kings* 2 27-36 8 10-18 22 10 1-8 12 6-25 13 11 14 15 1 / *II Samuel* 7 4 17 12 1 14 24 10 14-(D) *II Kings* 7 4 17 12 1 4 24 10 14 / *I Kings* 14 5 16 17 19 20 13 14 22 35 42 21 17 24 22 1 23-(D) *III Kings* 14 5 16 17 19 20 13 14 22 35 43 21 17 24 22 1 23 / *II Kings* 1 2 3 14 20 5 1 19 9 1-10 17 9-14 23 19 1 7 20-37 20 21 10-15 22 14 20 24 1 4-(D) *IV Kings* 1 2 3 14-20 5 1-19 9 1 10 17 9-14 23 19 1 7 20-37 20 21 10-15 22 14 20 24 1 4 / *I Chronicles* 17 3 15 21 9-13 18 19-(D) *I Paralipomenon* 17 3 15 21 9-13 18 19 / *II Chronicles* 11 2 4 15 1-8 16 7 10 18 4 22 19 2 3 20 14 16 21 12 15 25 5 10 14 16 28 8 15 34 22 33 36 14 16-(D) *II Paralipomenon* 11 2 4 15 1-8 16 7 10 18 4 22 19 2 3 2 14 16 21 12 15 25 5 10 14 16 28 8 15 34 22 33 36 14 16 / *Ezra* 9 10-11-(D) *I Esdras* 9 10-11 / *Nehemiah* 9 30-(D) *II Esdras* 9 30 / *Isaiah* passim esp 1 10 23 2 10-22 5 8 13 5 20-25 6 1 13 1 1 2 28 1 29 30 30 8 14 32 1 33 4 37 1-7 37 21 38 38 4-8 49 1 12 56 1 59 21 61 1 3 65 1 5-(D) *Isaias* passim esp 1 10-23 2 10 22 5 8 13 5 20-25 6 1 13 1 1 2 28 1 29 30 1 3 8 14 32 1 33 4 37 1 7 37 21 38 38 4 8 49 1 2 56 1

59:21 61 1 3 63 1 23 / *Jeremiah* esp 1 5 14 7:23 6 1 1 10 16 1 13 17 19-20 19 1 15 25 4-6 25 15 3 26 1 24 28 1 17 29 15 19 35 15 44 4—(D) *Jeremias* esp 1 5 14 7:25 26 11 10 16 1-13 17 19-20 19 1 15 -5 4-6 25 15 30 26 1 24 28 1- 7 29 15 19 35 5 44-4 / *E ekiel* 1 39 passim esp 2 1 3-27 11 1-5 12 8 20 21 1 17 33 33-34 6 35 1-36 7—(D) *E echiel* 1-39 passim esp 2 1 3-27 11 1-5 12 8 -0 21 1 17 33 33-34 6 35 1-36 7 / *Hos a* passim esp 6 4-6 12 9-10—(D) *Osee* passim, esp 6 4 6 12 9-10 / *Jo l* 1 1 2 12 14 / *Amos* pass m esp 3 7-8 5 1 27 7 14 17 / *J nah* 3—(D) *Jo as* 3 / *Micah* passim esp 3 8—(D) *Micheas* pa s m esp 3 8 / *Nahum* pass m / *H b kkuk* passim—(D) *Habacuc* passim / *Zephaniah* p ssim—(D) *Sopho s* passim / *H ggai*—(D) *Aggeus* / *Zechariah* 1 -6 7 8 14 8 16-17—(D) *Zach arias* 1 1-6 7 8 14 8 16-17 / *Malach* pas sim esp 4 5-6—(D) *Malachias* pass m esp 4 5-6

APO RY HA *E cles asticus* 36 15-16—(D) OT *Ecclesiasticus* 36 17 18 / *Baruch* 2.20-2 —(D) OT *Baru h* 2.20-21

N w T TAMENT *Matthew* 22 36 40 / *Luke* 11 48-50 16 14- 6 / *Acts* 9 3 16 26 13 18 / *I Cori thia s* 14

18 AUGU TINE *City of God* BK XVII 449a 472 c esp CH 1 449 -450 CH 3 450c-451c CH 24 471d-472 c

20 AQU N S *Summa Theologica* PART III Q 26 A 1 R 1 845b-846a

21 DANTE *D ine Comedy* PURGATORY XXX II [2 -90] 104b-105 PAR IS IX 118c 120a esp [61-63] 119b XVII 132a 133 XX [103]-XXII [8] 139b-d XXVII [10-66] 147b-148a [121 148] 148c d

23 HO ES *Leviath n* PART II 160b-c PART III 182d 183a 188d 189c 204a

32 MI TON *P rad Lo t* BK I I [167 193] 139 b BK X [6-6-749] 313b-315b [80 -834] 316b-317b BK XI [235 248] 324b [315-330] 326a b

33 P SC L *Pen é s* 73 -733 317a

40 G B ON *D line a d F ll* 194d

41 GIB ON *Decl ne a d Fall* 229c 233c esp 230 231b 306 c

43 M LL *Represent ti e G ernment* 341a-c

46 H G L *Ph los phy f History* PART IV 322b-c

48 MELV LLE *Moby D ck* 35a 36b

54 FREUD *Civil zatio and It D contents* 793c

1d The r ligious gn fican e of th fulfill ment of prophecy

NEW T STAMENT *M tthe v* passim esp 18- 3 2 3-6 3 1 3 4 2 17 5 17 18 8 14 17 1 1 13 1 14 17 21 1-6 27 3 10 27 35 / *Ma k* 1 -8 / *Luke* 4 6-2 / *John* 1 19-27,45 5 39 7:25-5 12 37 41 / *A ts* 2 1-36 3 26 8:26-40 13 16-5 5 13 21 4 14 15 28 16-29 / *Rom ns* 9-11 / *H b ew* passim esp 1 1 14 2 6-13 3 7 11 4 3-7 5 5-6 8 8 12 / *II Pet r* 1 19-21

18 AUGUSTIN *City of God* BK VII CH 32 262 b BK X CH 32 319d 322a c K XV CH 26 419b 420a BK XVI CH 2 422b-423d CH 37 42 444b-448a K XVII 449a 472a esp CH 3 450c-451c K XVIII CH 11 477c d CH 23 483d-485 CH 26 36 485d-493b CH 44-54 498a 507a c BK XIX CH 22 525b c BK XX CH 4 532b-c CH 21 549d CH 28 30 556c 560 BK XXII CH 3 588a b

20 AQUINAS *S mma Theologica* PART II II Q 5 A 2 ANS 411b 412a

23 HOBBES *Leviatha* PART I 83c PART II 160b PART II 165a 167b passim 187b-c 242b 244b c PART IV 248a b 251c 252d

32 MILTON *Christs Nati ity* [1 7] 1a / *Parad se Lost* BK III [167-193] 139a b BK XI [656-749] 313b 315b [802-834] 316b 317b BK XII [235- 48] 324b [315-330] 326a b

33 P SCAL *Pen ées* 570-578 273b 276a 598-600 278b-279a 613 282b 283a 616-618 283b-284a 637-644 289b-291b 659 293a 662 293b 670 295 b 678 297a b 684-686 298b-299b 692 741 300b 319a 744-745 319a b 75 -758 320a 321a 761 321b 322a 768 322b 77 323 8 9-83 333b 334a 838 335a

35 HU E *Human Understa ding* SECT X DIV 1 1 497a b

40 GIB ON *Decl ne and Fall* 181b 187c 188c 206a b 297a 307d

41 G BBON *Decline nd F ll* 230c 231a

52 DOSTO VSKY *B others Karama ov* BK V 127b-137c passim

2 The vocat on of prophecy the possession of foreknowledge

2a The fo eknowledge possessed by the spir its in the afterwo ld

OLD T TAM NT *I Samuel* 28 6- 0—(D) *I Kings* 28 6-20

4 HOM R *Il ad* BK XXIII [54-81] 161d 162a / *Ody ey* BK X [487-540] 241a c BK XI [90-137] 244

5 AES HYLUS *Pers n* [739-842] 23a 24b

5 SO HO LES *Philoctetes* [1408 1444] 194d 195a c

6 H RO OTUS *H st ry* BK V 178a 180a

13 VIR *Aeneid* K VI [756-89] 231 235a

19 AQ NAS *Summa Theologica* PART I Q 89 A 3 R P 3 475d-476c

21 DANT *D vi e Com dy* HELL, VI [37-93] 8d 9b X [114] 13d 14d XV [1-99] 21a 22 XXIV [12 51] 35d 36a PURGATO Y XI [09-142] 69d 70b XIV [27 72] 73d 74c XX [34 96] 83c 84a XXIV [37-93] 90a XXXI [9] 104b 105a PARAD IX 118 120a P [6 -63] 119b XVII [-99] 132 133 X X [97 148] 136 -c XX [1 3]-XX [8] 139b d XX [0-66] 147b 148 [121 148] 148c d XXX [27 48] 153a b

(2 *The vocation of prophecy the possession of foreknowledge*.)

2b The political office of prophecy priests soothsayers oracles

4 Homer *Iliad* bk i [59–100] 3d-4b / *Odyssey* bk ii [146–207] 189c 190b
5 Aeschylus *Seven Against Thebes* [1 38] 27a c / *Agamemnon* [104 159] 53a d
5 Sophocles *Oedipus the King* [300–512] 102a 103d / *Oedipus at Colonus* [1348–1555] 126c 128b / *Antigone* [988 1114] 139c 140c / *Ajax* [745 783] 149c d / *Philoctetes* [604–619] 187c [1326 1347] 194a
5 Euripides *Helen* [744 760] 305b / *Phoenician Maidens* [834 1018] 385 387b
5 Aristophanes *Knights* [108 233] 471b 472d [941 1099] 481d 483d / *Peace* [1035–1126] 537d 539a / *Birds* [959–991] 554c 555a / *Lysistrata* [6 780] 593a b
6 Herodotus *History* bk i 13c d 19d 20a bk ii 83b c bk iv 135b 136a 150b d 151b 153a bk v 160a b 167d 168b 171d 172a 177b d bk vi 191d 192b 194d 195b 197d 198a bk vii 241c 242a 246b c bk iii 281a 284d 285b bk ix 295d 297a 302b c
6 Thucydides *Peloponnesian War* bk i 355b c 378a b
7 Plato *Meno* 189d / *Republic* bk v 345d 346a / *Statesman* 597d 598a
9 Aristotle *Rhetoric* bk i ch 15 [1375b35–1376a2] 620c
13 Virgil *Aeneid* bk iii [356–46] 157a 160a
14 Plutarch *Numa Pompilius* 52b-c / *Poplicola* 82a b / *Camillus* 103b 104a / *Pericles* 123c 124a / *Timoleon* 207 d / *Aemilius Paulus* 214b d / *Marcellus* 259c 260c / *Aristides* 268a d 271a c / *Caius Marius* 339b-c 351d 352a / *Cimon* 398d 399b / *Nicias* 424d / *Alexander* 541a 542a 552b c / *Caesar* 594b-c / *Dion* 789b 790a 791a 792a
15 Tacitus *Annals* bk ii 30d 31a 37b bk vi 91b bk xi 103d 104a bk xii 121d / *Histories* bk 195b c bk i 214d 215c 235a c bk iv 285d 286 287b
22 Chaucer *Troilus and Cressida* bk iv stanza 196–202 114a 115a bk v stanza 208 2 8 147b 148b
23 Hobbes *Leviathan* part i 83d 84a part iii 183b d 185a 188a 199b 204a
26 Shakespeare *Julius Caesar* act i sc ii [12 24] 569c act ii sc iv [21 38] 580a b
27 Shakespeare *Antony and Cleopatra* act i sc ii [1–82] 312b 313a
38 Rousseau *Social Contract* bk i 401c 402a
40 Gibbon *Decline and Fall* 121 194d 390d 457d-458a 734c [n 137]
43 Mill *Representative Government* 341 c
46 Hegel *Philosophy of History* part i 217b c 235b part ii 273b c part iii 292b d
54 Freud *General Introduction* 477c

2c The Hebraic conception of the prophetic vocation the Law and the prophets Christ as prophet

Old Testament *Exodus* 3 1 4 17 6 13 8–30 7 1–2 19 9 19–24 20 18 21 24 1 2 9–18 33 9–11 17 23 34 1 4 / *Numbers* 11 11 17,24 29 12 1–9 / *Deuteronomy* 13 1 11 34 10–12 / *Joshua* 3 7–8 4 14—(D) *Josue* 3 7–8 4 14 / *Judges* 4 / *I Samuel* 8 10–18,22 10 1 13-14 —(D) *I Kings* 8 10–18 22 10 1 3 24 / *II Samuel* 12 1 14—(D) *II Kings* 12 1 14 / *I Kings* 14 5 16 17 18 19 16–21 20 13 14 22 37 42 21 17 24 22 14 22—(D) *III Kings* 14 5 16 17 18 19 16–21 20 13 14 22 37 42 21 17 24 22 14 2 / *II Kings* 1 2 esp 2 9–15 3 9–20 4–6 8 1 15 9 1 10 13 14 21 19 1–7 20 34 20 22 8 20—(D) *IV Kings* 1 2 esp 2 9–15 3 9–20 4–6 8 1 15 9 1 10 13 14 21 19 1 7 20 34 20 22 8 20 / *II Chronicles* 18 4 26 34 14 28 36 15 16—(D) *II Paralipomenon* 18 4 26 34 14 28 36 15 16 / *Isaiah* 6 8 12 8 11 18 20 37 6–7 21 35 38 4 8 49 1 12 61 1–3—(D) *Isaias* 6 8 12 8 11 18 20 37 6 7 21 35 38 4–8 49 1 12 61 1 3 / *Jeremiah* 1 5 14 6 27 7 5 26 9 12 18 18 23 20 25 4 7 15 30 26 28 35 15 36–38 42 1 43 3 44 4—(D) *Jeremias* 1 5 14 6 27 7 25 26 9 12 18 18 23 20 25 4–7 15 30 26 28 35 15 36–38 42 1 43 3 44 4 / *Ezekiel* 2 1 5 4 12 33 30–33 —(D) *Ezechiel* 2 1–5 4 12 33 30 33 / *Daniel* 2 4–6—(D) *Daniel* 2 3 98–6 / *Amos* 7 14–17 / *Jonah*—(D) *Jonas*
Apocrypha *Ecclesiasticus* 39 1 11 47 46 48 49—(D) OT *Ecclesiasticus* 39 1 1 45 47 48 49 / *Bel and Dragon* 33 39—(D) OT *Daniel* 14 32 38 / *II Maccabees* 2 1 7—(D) OT *II Machabees* 2 1–7
New Testament *Matthew* 3 1 3 5 17 18 11 20–24 12 36–45 13 53–57 19 27 3 25 esp 23 29 39 / *Mark* 1 4–9 6 1 4 / *Luke* 4 22 24 16 14 16 / *John* 1 15 27 4 43 8 52–53 / *Acts* 3 22 26
18 Augustine *City of God* bk vii ch 262a b bk xvii ch 1 3 449a-451c bk x ch 27 486c
20 Aquinas *Summa Theologica* part i q a 8 750d 751d
23 Hobbes *Leviathan* part i 69d 70c part 160b c part iii 169d 170 182d 183 201b c 204a 205a d part iv 269a
32 Milton *Paradise Lost* bk xii [10 321b 325a esp [173 269] 323 325
33 Pascal *Pensées* 732 733 317a
38 Rousseau *Social Contract* bk ii 401 402a
40 Gibbon *Decline and Fall* 181b
41 Gibbon *Decline and Fall* 230c 231a
43 Mill *Representative Government* 341a c
54 Freud *Civilization and Its Discontents* 793

3 The variet es of prophecy and the instru ments of d in tion

3a The institut on of oracles the interpreta t on of oracul r or p ophet c utter nces

4 HOME Odys ey BK XIV [321 336] 263b-c BK X X [291 307] 292b
5 A CHYLUS Seven Aga nst Thebes [742 777] 35b-c / Prometheus Bound [484 499] 45a [640-682] 46d-47b / Choepho oe [269-305] 72d 73a [021 1076] 80a d / E imenides [1-33] 81a b
5 SOPHOCLES Oedipus the King [1185] 99a 110b / Oed pus at Colonus [386-419] 117d 118a / Trachiniae [155 177] 171c [821-830] 177b
5 EU PIDES Iphigenia Amo g the T uri [1234 1283] 422b c / Iphigen a at Aulis [872 883] 433a
5 ARIS PHAN Kn ghts [1 8 233] 471b-472d [94 1099] 481d 483d / Peace [1039-1126] 537d 539a / Birds [959-991] 554 555a / Lys trata [762 780] 593a b / Plutus [78] 629a 630
6 HERO OTUS History BK I 4d 10a c 11b d 14a 15b 20a d 21b 22a 37c d 38a b 39c d BK I 60d 61b 70d 71a 77a b 80c 81d 82b 83b c BK III 101d 102b 103b d BK IV 126d 127a 150b d 151b 153d BK V 160a b 178a 180a 183d 184a BK VI 189a b 191d 192b 194d 195b 197d 198a 199d 201a 201d 202c 211b d 212d 213 c BK VII 215a 234d 239 240d 241c 242a 246b-c 248b-c 250b 255c d BK V 263b c 268b d 269 270a 273b c 276d 277a 281a 284d 285b BK IX 295d 298c 302b 308
6 THUCYDIDES P l po esian War K I 355b 378a b 380a d BK 392a b 401a b 415d 416c BK I 442c 443a BK V 489a b
7 PLAT Ap logy 201d 203a / Timaeu 467b c
9 AR TOTL Rheto ic K I C I 15 [1375b35 1376a2] 620
12 E I T TUS D scourses BK I CH 17 122d 124a BK I I CH I 175d 176a
13 VIRGIL A neid K II [108 136] 127 b BK I [84 12] 149b 150a [132 191] 150b-152b [356-462] 157 160 BK VI [42 I] 212a 213b BK VII [81- 6] 238a 239a
14 P UTAR H Cam llu 103b 104a / Ar st des 268a d / Lys der 363d 367d / Al xander 546c d 553d 554a / Demosthenes 698b 699
15 T C TUS A al BK II 37a b / H sto ie K I 196b c K II 214d 215c 235a-c
18 AU USTINE Confess ns K VI par 6 36 d / City of God K I CH 17 180b BK VIII 16 275c 276 BK XV I C I 3 450c-451c BK X I I CH 23 483d-485a K XX CH 2 549d CH 28 556 557a / Ch st a D trin BK II CI 33 670b
23 HO S Levi ath n PART I 81d 82a ART I I 183c d
24 RABELAIS Gargantua and Pa t gruel BK I 66b 67d BK III 158b 171a 173d 175c 215c 219b
25 MONTAIGN Essays 18d 20d
27 S AKESPEARE Cymb l ne ACT V SC V [426-475] 488b d / Winter s Tale ACT II SC I 495b 497c esp [172 98] 497b c
33 PASC Pensées 607 280a 659 293a 672 296a 678 297a b 683-69 298b 301a
38 ROUSSE U So ial C tract BK II 401d 402a
40 GI BON D cline a d Fall 121a 170c 225c d
46 HEGEL Philos phy of Histo y PART I 52d 253a PART II 264d 265c 273b c PART III 311a b

3b Omens and portents celestial and terres trial s gns signs as confirmations of prophecy

OLD TESTAMENT Genes s 9 8 17 25.22 23 / Exodus 4 1-9,29-31 7 8 13 17 2 7 33 9-10 34.29-3 40 32 38 / Numbers 9 15 23 1 24-25 12 / Judg s 6 17-22 36-40 / I Samu l 10.2 16—(D) I Kings 10.2 16 / II Samuel 5 23- —(D) II Kings 5.23 25 / I Kings 13 6 17 12 24 18 16-39 esp 18 30-39—(D) III Kings 3 1-6 17 12 24 18 6-39 esp 18 30-39 / II K g I 8- 7 2 9-15 9-22 5 1 9 19 29 4- 1—(D) IV Kings 1 8 17 2 9-15 9 22 5 1 19 19.29 20 4 11 / I Chronicles 4 14 15—(D) I Paral pomenon 14 14 5 / Isa ah 38 1 8—(D) Is ias 38 -8 / Jerem h 1 11 16 10.2 13 11 18 1 10 24—(D) Jeremias 1 16 1 2 3 1 1 18 10 24 / E ek l 37 19—(D) E ch l 37 1 19 / D iel 5 / Amo 7 1-9 8 2
NEW TESTA E NT M tthew 12 38 40 16 1-4 24 / M rk 8 11 13 4 30 / Luk 1 39-44 2 11 12 16 29 21 7 13 / Joh 2 18-22 6 30 31 / Acts 2 16-22 / I Cor nthia s 1 22 24
4 HO ER Iliad BK II [301-332] 13a b BK V I [30- 83] 52 53 [45 252] 53c d BK XII [95-25] 84 d / Odys ey K II [146-207] 189c 190b K XV [60- 81] 267c d [525 538] 271 BK XVII [541 550] 282d BK XX [91 121] 297a b [40-246] 298c [345-357] 299d
5 A SCHYLU Persi s [76-23] 17 d / Prometheus B und [484 499] 45a / Agamemnon [04 59] 53a d
5 SOPHOCL O d pus at C l nus [1447 1555] 127b 128b / A t g [988-1 4] 139c 140 / Trach ae [663 718] 175d 176b
5 EU IPIDES Phoenician Ma dens [834 84] 385
5 ARIS O HAN S Bi ds [708 726] 551d 552a
6 H RODOTU H tory K I 12b d 17a b 18b 39 -40a K II 65b 86c 87 K 106 d K V 124d 125 135b 136 138a BK V 183d 184a K V 190 d 199d 200 200d 201a 204b-c 212d 213 BK VII

(3 *The var eties of prophecy and the instruments of d v nat on* 3b *Omens and port nts celestial and terr strial s gns s gns as con firmations of prophecy*)

223b c 227a 248c d BK VIII 266b d 267a 270c 271a 278c 285c 286a BK X 289d 290a 296c 297a 298b c 301d 302a 307d 308c 313d 314

6 THUCYD DES *Peloponnesian War* BK II 389a b BK VII 552c 560d

9 ARI TOTLE *History of Animals* BK III CH II [518 32-36] 43a CH 20 [52 13 20] 47a b BK VI CH 2 [559b16 0] 86b CH 2 [576 1 4] 101c

12 LU RETIU *Natu e of Th gs* BK VI [43-55] 80d 81a [379 422] 85b d

12 EPICTETUS *Discourses* BK I CH 17 122d 123c

13 VIRGIL *Aeneid* BK I [387 401] 113b 114a BK I [62 233] 128b 130b [679 704] 143b 144a BK III [388 393] 157b-158a [523 547] 161b 162a BK I [185 2 1] 216a b BK VII [59-8] 237b 238a K V II [520-540] 273a b BK X I [24 265] 360b 361a

14 PLUTARCH *Romulus* 19b 20c / *Numa P m pilius* 52b c / *Poplicola* 80b d 82a b / *The mi to les* 94d / *Can illus* 103b 104a / *Pericl* 123c 124a 138d / *Fabius* 141d 142a / *Timo leon* 198 d 207c d / *Aemilius Paulu* 214b d / *Marcellus* 248 d 259 260c / *Ari tid s* 271a c / *C ius M us* 339c d / *Sull* 371d 372c / *L cullus* 403d 404a 404d 405a 411d 412a / *N ias* 429d 430b 435b d / *C ssus* 447c d / *Agesilaus* 483a b / *Alexa der* 568a b 575a 576a / *Phocion* 615b d / *Caius Gr cchus* 685c d / *Dion* 789b 790a / *M cus Brutus* 818 b 822b / *Galba* 866d 867d / *Otho* 871b c

15 TACITU *A nals* BK I 9a b 9d BK II 27b K IV 79b BK VI 95d 96a BK XI 103b BK XII 119b 124b BK XIII 141a b K XIV 144c 147 149b-c BK XV 159b c 168d 169a / *Histories* K I 189d 190a 206a 212d 213a BK II 228a b 235a K III 256d K V 298b

17 P OTINUS *Se ond Enne d* T I I CH 7 44c 45a / *Th d Enn d* TR I CH 5-6 80a 81b

18 AUGUSTINE *Co fessions* BK IV p r 4-6 20a d BK II par 8 10 45d-47a / *C ty of God* BK V H 1-7 207d 212c CH 9 213b c BK VII CH 35 263c 264a / *Ch ist n D ctrin* K II CH 21 24 647a 649a

19 AQUINAS *Summa The logica* PART I Q 70 A 2 REP I 364b 365a

23 HOB ES *Leviathan* PAR I 80 d 81d 82b PART III 188a 188d 189c

24 RABELAIS *Ga g ntua a d Pa tagruel* BK II 146a 150d 175c 178a BK IV 268b 269c 277d 279b

25 MONT IGNE *Essays* 18d 20d 223d 224a

26 SHAK SP ARE *3rd Henry VI* ACT V SC I [34-93] 103c 104a / *Rich rd II* ACT II SC IV [7 17] 334c d / *Julius Caesar* ACT I S I 572c 574b ACT V SC I [71 88] 592d

27 SHAKESPEARE *King Lear* ACT I SC II [1 166] 249a c / *Macbeth* ACT II SC IV [1 294a b

29 C RVANTES *Don Quixote* PART II 381a b

30 BACON *Advancement of Learning* 14b-c 54 55a

32 MILTON *Paradise Lost* BK I [594-599] 106b BK VIII [511-514] 243b

33 PASCAL *Pensees* 173 203b 04a

35 LOCKE *Human Understandin* BK IV CH XIV SECT 15 388a c

36 STERNE *T i tram Sha dy* 332a 334b

40 GIBBON *Decline and Fall* 3c 457d 547a b 571a 614b c

41 GIBBON *Decline and Fall* 232a c

46 HEGEL *Philosophy of History* PART II 263d 265c PART III 292b d

47 GOETHE *Faust* PART II [4947 49/6] 122b-123a

48 MELV LLE *Moby Dick* 121a 175b 176a 409b 410b 413b 414a

51 TOLSTOY *War a d Peace* BK VI 259c d BK V I 292d 293b 298d 300a BK VII 340d 341a c BK IX 377b 379a BK X 428a 429a

54 FREUD *General Introd ction* 467a b

3c Dreams visions visitations

OLD TESTAMENT *Genesis* 16 7 13 18 1-15 19 12-22 20 3 7 21 17 19 22 11 19 26 6 28 10 22 31 11 13 24 32 24 32 35 9-13 37 1 11 40 41 / *Numbers* 12 5-8 22 15 35 / *Deuteronomy* 13 1-5 / *Judges* 2 1 4 6 11 23 7 13 15 13 / *I Samuel* 28 6-2 —(D) I K g 28 6- o / *II Samuel* 7 4 17—(D) *II Kings* 7-4 17 / *I Ki gs* 3 5 15 9 1-9 19 2-8 21 23—(D) *III K ngs* 3 5 15 9 1-9 19 2-8 22 17-23 / *II Kings* 1 3 4 5—(D) *IV Kings* 1 3 4 15 / *I Chronicles* 21 15 20 28 3 —(D) *I Paral pomenon* 21 15 20 28 30 / *II Chron cles* 18 11 2—(D) *II Paralipomenon* 18 1 2 / *Esther* 10 1 3 / *Job* 4 13 21 33 14 16 / *Isa ah* 6—(D) *Isaias* 6 / *Jere m ah* 14 14 23 16 25 32 4 29 8-9—(D) *Jerem as* 14 14 3 6 25 32 24 29 8-9 / *Ezek el* 1 3 8 11 37 1 11 40-48—(D) *E ch l* 1-3 8 1 37 1 11 40-48 / *D n l* 2 4 , 12 pass m / *Joel* 2 28 29 / *Zech riah* 1 7-6 15—(D) *Zachari s* 1 7-6 15

APOC YPHA *Rest of Esther* 10 4 11 12—(D) OT *E ther* 10 4 11 12 / *W sdom of Solomon* 1 18 14 19—(D) OT *Book of Wisdom* 1 18 14 19 / *Ec lesiast cus* 34 1 7—(D) OT *E cle iast cus* 34 1 7 / *Bel a d Dragon* 33 39 —(D) OT *D l* 14 32 38 / *II Maccabees* 15 11 16—(D) OT *II Machabees* 15 11 16

NEW TESTAMENT *M tthew* 1 20-25 2 12 13 19 23 17 1-8 28 -7 / *Ma k* 9 1 10 / *Luke* 1 11-38 2 8 5 9 28 43 24 1 10 / *Acts* 2 1 18 9 3-8 1 18 9-1 / *II Corinthian* 12 1 4 / *Rev lat on*—(D) *Apocalypse*

4 H IER *Il ad* BK I [59–67] 3d K II [1–83] 10 d / *Odyssey* BK I [,87–841] 207 d BK XIX [509–581] 294c 295a c
5 AESCHYLUS *Pers ans* [176–230] 17a d / *Seven Against Thebes* [24 29] 27b / *Prometheus Bound* [484 499] 45a [640–682] 46d 47b / *Ag memno* [1072 134] 63c 66b / *Choepho oe* [514–552] 75
5 So HOCL *Electra* [405–515] 159b 160a [634–659] 161a b
5 EURIPID S *T ojan Women* [308 461] 272d 274a / *Hecuba* [59–97] 353d / *Iph gen a Among the Taurs* [42–66] 411c d [1234 1283] 422b c
5 ARIST IAN *Kn ghts* [1090–1095] 483c d
6 HERODOTUS *History* K I 8a 10a 25b 31a 47a c BK II 78d 79c BK III 95d 103b 104b 116a b BK IV 126d 127a 154c d 155b-c BK V 170c d BK VI 196d 197a 205d 206a 208b 211a BK VII 218b 220b BK VI I 274b-c 276b-c
7 PLATO *Euthydemus* 66a b / *Apology* 207b c 211a b / *Crit* 213b-d / *Timaeus* 466d 467c
8 AR STOTL *Proph sying* 707a 709a c
12 LUCRETIU *Nature of Things* BK [102 1 6] 2b-c
13 VIR IL *Aeneid* K III [132 191] 150b 152b BK IV [450–473] 179b-180a [554–57] 182b-183a BK VI [76–97] 213a b BK VI [3 3 474] 245a 249 BK V I [18–89] 259b-261b
14 P UTARCH *Them sto l s* 98d 99a / *Alcib a des* 174a d / *C tola u* 185b 186a / *P l p idas* 239d 240 / *4 tid s* 268a d / *Pyrrh* 329 d / *C mon* 392b c 398d 399b / *Lu ul lu* 405c 411a b / *Eumenes* 473a b / *Ag s la s* 483a b / *Pompey* 514d 515 532b 534d 535a / *Alexa der* 548d 549a / *Ca s* 601d 604d / *Demosthe s* 702c 703b / *Ci er* 721c 722a / *Deme r us* 727b d / *D on* 781d 782a 801b / *M c is B utus* 816d 817c
15 TACITUS *A als* BK 26c BK XI 101b c 105 BK XI 112d 113a BK XVI 176b / *H tories* K IV 293a 294a
18 AUGUSTIN *C fe s ons* K III par 19 o 18b-19 / *C ty f G d* BK V I CH 16 275c 276a BK XI CH 323 c
19 AQU NAS *Summa Th ologi a* PART I Q 12 A II AN 59d 60d Q 86 A 4 REP 2 463d 464d
20 AQUINAS *S mm Theologica* ART I Q 7 A 8 R I 750d 751d
21 D N E *D e Comedy* I ELL XXX [13–75] 49 50b URGATO Y IX [13–69] 66a-c XIX [1–63] 81c 82a XXVII [9 117] 95c d
22 C U ER *T lus d Cres d* K V TANZA 46–56 126a 127b TAN A 177 186 143b 144b S ANZ 2 7–2 9 147 149a T N A 245 152 / *N s Pr st T le* [14 976–15 62] 452b 455b
23 H B *Le iath n* P RT I 51d 52a 69d 70c PART II 173 I 6d 177b 184 187 CON CLU ON 281d 28 a
24 RA ELAIS *Ga g ntu a d P tagru l* BK 150d 156c BK V 278d
26 SH KES EARE *2nd Henry VI* A T I SC II [17 55] 36 37a SC IV 40a 41a / *Rom o and Jul t* ACT I SC IV [44 114] 291a d / *Mid summer N ght s Dream* ACT II SC II [145 156] 360b-c / *Julius Ca* ACT II C II [75–90] 578d 579a ACT IV SC III [275 89] 591c ACT V S V [16–19] 595b
27 SHAKESPEARE *Hamlet* ACT I SC I 29a 31c / *Macbeth* A T I SC III 285b 287b A T III SC V 299b d ACT IV C I 300b-302b ACT V SC VIII [6–2] 310b / *Cymbel e* ACT V SC IV [30–122] 481c 482b C V [426–465] 488b d
30 BACON *Advancement of Lea ni g* 8c 54d 55a 55c
32 MILTON *Pa adise Lost* BK V [28 I 8] 176a 178 [469–5 5] 185b 186a K V I [283–336] 238b 239b K XI [193]–BK XII [649] 303b-333a / *A opagitica* 389a b
37 F ELDING *Tom J s* 162b 163a
40 GI ON *Decline and F ll* 189b c 294d 296b
46 HEGEL *Philosophy of History* PART I 244d ART II 264d 265b
47 GO THE *Faust* PART II [1 384–401] 277a b
51 TO STOY *W ar a d Peace* BK VII 300c 301b BK XII 546a d 561b 562a
52 DOSTO V KY *Brother Karama ot* BK V 127b-137c pass m
54 F UD *Or g and Devel pment f Psych 4 alysis* 11c / *Interpret t n of D ms* 137c 138 b 178b c 179d [fn 2] 387a c / *General Introdu t on* 477b d

3d Prophecy by the direct word of God

O D TESTA IENT *Gen* 2 6 17 3 8 9 4 6–15 6 3 7 13 21 7 1–4 8 2 9 7 1 6–7 12 8 3 14 18 5 17 8 17 21 I 3 26 1–5 24 35 9 13 / *E dus* 3 4 2 6–8 8 30 7 2 p ssim 16 4–5 12 7 5–6 4 19 3–20 22 32 9– 4 30–34 33 1–34 7/ *Numbers* 5–8 14 14 I 12 20–35 / *D u ter omy* 4 0–15 36 5 31 14 21 / *Josh a* I 1–9 3 7–8 4 1–3 6 1 5 8 10 8—(D) *Josue* –9 3 7–8 4 1 3 6 1–5 8 10 8 / *I Samu l* 3 6 13—(D) *I Ki gs* 3 16 1–3 / *I K g* 19 9–18—(D) *III King* 19 9–18 / *I aiah* 6 48 2 5—(D) *Is* 6 48 2–5 / *Jeremi h* —(D) *Jerem s* / *E ek l* 1 39 pass m esp —(D) *Ez h l* 1 39 pas n p 2 / *Ho* 1 3—(D) *Os e* –3 / *Am* 7–9
N W TESTAMENT *Matthe v* 17 1–9 / *Acts* 6 13 8
18 AU U TINE *C ty f God* BK XI CH 3 323d BK XV H 16–29 433c-441 CH 36 443d 444b CH 38 445a-446a
19 AQUINAS *Summ Th logi a* PART I Q 12 A I ANS nd R I 59d 60d
23 HO S *Le. than* PART 165d 166 183d 184 CONC U ON 281d 282a
32 MILTON *Pa ad Lost* K X I [6– 5] 321b 322b [173 269] 323 325
52 DO TO V KY *B thers Kar m zov* K V 127b 137c

4 Particular prophecies of hope and doom

4a The Covenant and the Promised Land

OLD TESTAMENT *Genesis* 9 8 17 12 1 7 13 14 18 15 17-18 2 1 19 26 1-6 24 25 28 11-22 35 9-13 / *Exodus* 2 23 3 22 6 2-8 19 4-6 20 1 17 32 11 14 33 1 3 34 10 11 / *Leviticus* 26 40-45 / *Numbers* 14 6-9 32 34 1 12 / *Deuteronomy* 1 7 8 19-31 3 16-23 4 12 13 23 40 5 6 1 3 10-11 18 19 7 12 13 8 7 10 18 20 9 1 6 23 29 10 1 11 26 1 11 27 32 esp 27 3 28 1 14 29 1 29 3 16 20 34 1 4 / *Joshua* esp 1 23 1 24 13—(D) *Josue* esp 1 23 1 24 13 / *Judges* 2 1-6 / *I Kings* 8 56 —(D) *III Kings* 8 56 / *I Chronicles* 16 13 22 —(D) *I Paralipomenon* 16 3 22 / *Nehemiah* 9—(D) *II Esdras* 9 / *Psalms* 74 19 20 78 1 7 52-55 105 6 44 111 132—(D) *Psalms* 73 19-20 77 1-7 52 55 104 6-44 110 131 / *Isaiah* 54 1 10 56 4-6 59 20 21 61 7 9 —(D) *Isaias* 54 1 10 56 4-6 59 20-21 6 7 9 / *Jeremiah* 11 1 10 31 31 34 34 12 18—(D) *Jeremias* 1 1 10 31 31 34 34 12 18 / *Ezekiel* 6 60 63 37 26-28—(D) *Ezechiel* 16 6 63 37 26-28 / *Hosea* 2 16-18 6 4 7 —(D) *Osee* 16 18 6 4 7

APOCRYPHA *Ecclesiasticus* 44 19 23—(D) OT *Ecclesiasticus* 44 20 26

NEW TESTAMENT *Luke* 1 71 75 / *Acts* 3 25 7 1-8 / *Romans* 9 1 9 1 25 27 / *Galatians* 3 13 18 4 22 31 / *Ephesians* 2 11 13 / *Hebrews* 8 6-9 28 1 14 17

18 AUGUSTINE *City of God* BK XVI CH 6 29 433c 441a CH 32 441c 442c CH 36 443d 444b CH 38 445a d BK XVII CH 7 458c 459d BK XXII C 1 3 588a b

23 HOBBES *Leviathan* PART II 177 180a

32 MILTON *Paradise Lost* BK XI [880-897] 318b BK XII [1 1 6] 321b 322a [51 172] 322b 323a [259-269] 324b 325a

33 PASCAL *Pensées* 63 -640 289b 290a 675 296b 297a 713 304b 308a 717 7 9 308b 309a

4b The destruction of Jerusalem and the dispersion of Israel the restoration of Israel and the rebuilding of the Temple

OLD TESTAMENT *Leviticus* 26 27 39 / *Deuteronomy* 4 25 3 28 15 3 1 31 16-18 / *Joshua* 23 12 6—(D) *Josue* 23 12 16 / *II Kings* 17 20 2 2 2 1 15 22 12 0 23 26-27 4 4 1 2 25—(D) *IV Kings* 1 2 2 21 21 0 15 2 12 20 23 26-27 24 1 4 1 25 / *II Chronicles* 7 19- 2 34 21 33 36 15 23—(D) *II Paralipomenon* 7 19-22 34 21 33 36 15 23 / *Psalms* 14 7 53 6 78 58 72 79 85 1 3 126 137—(D) *Psalms* 13 52 7 77 58 72 78 84 4 125 136 / *Isaiah* 0 4 1 3 22 28 32 36-37 39 42 43 49 51 52 6 63 65 8 0 17 25 66—(D) *Isaias* 1 0 14 3 2 28 32 36-37 39 42 43 49 51-52 60-63 65 8 10 17 25 66 / *Jeremiah* 1 45 passim 49-52 passim —(D) *Jeremias* 1 45 passim 49 52 passim / *Lamentations* / *Ezekiel* 4-7 9 11 4 28 20-26 33 48 passim esp 33 23 29 36 1 37 8 39 22-40 2 43 1 10 47 1 23—(D) *Ezechiel* 4-7 9 11 24 28 20 6 33 48 passim esp 33 23-29 36 1 37 28 39 22 40 2 43 1 10 47 1 23 / *Hosea* 2 3 4-5 5 11 —(D) *Osee* 2 3 4-5 5 11 / *Joel* 2 3 / *Amos* passim / *Obadiah* passim—(D) *Abdias* passim / *Micah*—(D) *Micheas* / *Nahum* passim / *Habakkuk*—(D) *Habacuc* / *Zephaniah*—(D) *Sophonias* / *Zechariah* passim—(D) *Zacharias* passim

APOCRYPHA *Tobit* 14 4-5—(D) OT *Tobias* 14 6-7 / *Ecclesiasticus* 49 4-50 2—(D) OT *Ecclesiasticus* 49 5-50 2 / *Baruch* 5—(D) OT *Baruch* 5

NEW TESTAMENT *Matthew* 24 1 2 / *Mark* 13 1 2 / *Luke* 21 5-6 19 41 44

18 AUGUSTINE *City of God* BK XVII CH 7 458c 459d BK XVIII CH 46 500a d CH 48 501b c

23 HOBBES *Leviathan* PART III 179a b 214b c

33 PASCAL *Pensées* 638-641 289b 290a 7 3 9 304b 309a 722 309a 312a 726 313a 315b

4c The coming of a Messiah Hebraic and Christian readings of messianic prophecy

OLD TESTAMENT *Genesis* 3 15 12 3 18 8 21 12 22 18 26 4 28 14 49 10-1 2 6 / *Numbers* 24 15-25 / *Deuteronomy* 8 15 9 / *I Chronicles* 17 11-14—(D) *I Paralipomenon* 17 11 14 / *Job* 19 5 27 / *Psalms* 2 7 8 5-6 14 7 16 10 19 4-5 21 22 40 1-8 45 50 1 3 68 7 80 16-18 85 89 19 93 6-37 1 0 118 22 26—(D) *Psalms* 2 7 8 5-6 13 7 15 10 18 6 20-21 39 1-8 44 7 49 1 3 67 71 79 16-18 84 88 19-29 36-37 109 117 22 26 / *Isaiah* 7 10-16 8 3 4 9 6-7 11 1-5 16 1 22 20-25 28 16 29 32 35 4 4 1 11 41 2-3 8 14 25 42 1 7 45 46 11 12 49 1 13 22 23 52-55 59-66 passim esp 59 16-21 61 1 3 62 11-63 14 64 1-5 —(D) *Isaias* 7 10-16 8 3 4 9 6-7 11 1 16 1 22 20-25 28 16- 9 32 35 4 4 11 41 2 3 8 14 25 42 1-7 45 46 11 1 49 1 13 22 23 52-55 59-66 passim esp 59 16-2 61 1 3 62 11-63 14 64 -5 / *Jeremiah* 23 5-6 30 7-9 31 31 33 33 10-18—(D) *Jeremias* 23 5-6 30 7-9 31 31 33 33 10 18 / *Ezekiel* 17 22 24 34 37 21 26 / —(D) *Ezechiel* 17 22 24 34 37 21 26 / *Daniel* 2 44 7 13 14 9 24 27 / *Hosea* 1 11 3 5 13 14 14 5-7—(D) *Osee* 1 11 3 5 13 14 14 6 8 / *Micah* 5 2 5 7—(D) *Micheas* 5 2 5 7 / *Zechariah* 2 0 3 8-9 6 12 14 9 9-11 11 6 13—(D) *Zacharias* 2 1 3 8 9 6 12 14 9 9-11 11 6 13 / *Malachi* 3 3 4 5-6—(D) *Malachias* 3 1 3 4 5-6

APOCRYP IA *Wisdom of Solom n* . I 2 —(D) OT *Book of W sdom* 2 12 22 / *Baruch* 3 36 38—(D) OT *B ruch* 3 36 38
NEW TESTAMENT *Matthew* 3 1 12 / *Mark* 1 4-8 / *Luke* 2 5-34 3 1-6 / *Joh* 1 19-25 40-45 7 26-31 / *Acts* 29-36 3 8 26 / *Rom ns* 11 25 7
18 AUGUSTINE *City of God* K VII CH 3 262a b BK X CH 32 319d 322a c BK XV CH 26 419b 420 BK XVI CH 2 422b-423d CH 37 444b 445a BK XVII 449a-472a c passim BK XVIII C 1 11 477c d CH 23 483d 485a CH 28 486 487 CH 30 487c d CH 33 34 490c 491c CH 44 498a d CH 46 500a d BK XIX CH 22 525b c
20 AQUINAS *Summa Theol g a* PART I-II Q 100 A 12 AN 264d 265d Q 103 A 2 ANS and REP 1 2 299b 300d Q 1 7 A 327b 329a PART III Q 26 A 1 R P 1 845b 846a
21 DANTE *Div e Comedy* PURGATORY XXII [55 93] 87a c
23 HOBBES *Leviathan* PART III 179d 187b c 204a 207b passim 229c 242b 243a b
32 MI TON *Upon th Ci cumcision* 12b 13a / *P adise Lost* BK XI [22 44] 299b 300a BK X I [2 7 244] 324a b [284-33] 325b 326b e p [307-3 4] 326a
33 PAS AL *Pen ees* 607-609 280a b 613 282b 283 6 6-619 283b 285a 662-664 293b 294a 673 296 675 296b 297a 69 741 300b 319 747 749 319b 320a 751-761 320a 322a
40 G BBON *Decl ne a d Fall* 181b 206a b 207d 308
41 G B ON *Decl ne and Fall* 134b

4d The second coming of the Lo d the Day of Judgment the end of the wo ld and the millen um

OLD TESTAM NT *Job* 9 25 9 21 esp 2 30-32 / *P alms* 50 72 96 10-13 97-98—(D) *Ps lms* 49 7 95 10- 3 96-97 / *Eccl tes* 3 16-17 11 9- 0 12 4 / *Is iah* 4 11 4 26 1 28 15 30 34-35 65 17 25 66—(D) *Is as* 4 1 4 26 1 8 15 3 34-35 65 7 25 66 / *D el* 7 2 27 1 2 / *J l* 14 11 7 32 3 / *Mic h* 4—(D) *M ch s* 4 / *Zeph iah*—(D) *Sophon s* / *Zech. ah.* 14—(D) *Z harias* 4 / *Mal ch* 3 4—(D) *Malach* 3 4
AP CRY H *Tob t* 13 9- 4 5—(D) OT *T b as* 3 1 4 7 / *Jud th* 16 7—(D) OT *Jud th* 16 20-2
NEW TE T M NT *M tth w* 4 5 11 20- 4 12 34 36 13 24 5 24 5 / *Mark* 3 4 37 / *L ke* 17 0-37 9 28 1 / *J n* 12 48 14 3 4 / *A t* 9 7 1 7 3 / *Rom s* 2 5 1 / *I C ri th ans* 5 23 8 / *Ph l ppians* 3 20-21 / *I Th ss l a s* 1 9- - 19 4 12-5 / *II Th l* 1 2 / *II T m thy* 3 4 8 / *Hebr ws* 9 26- 8 / *J mes* 5 7-9 / *I P ter* 4 5 7 / *II Peter* 2 9 3 / *I Joh* 18-29 4 17 / *Jude* 14-25 / *Revelat on* esp 1 4 20 14 15 16 21 20 1- 2 21—(D) *Apocalypse* esp 1 4 20 14 15 16 21 20 1 22 1
16 KEPLER *Ep t n* BK IV 848b
18 AUGUSTINE *C ty of God* BK XVIII CH 53 504d 505c BK XX 530a 560 c / *Ch istian Doctrine* BK I CH 15 628b c
20 AQUINAS *Summa Theologica* PART II SUPPL Q 73 922b 925b Q 74 A 1 925c 926c Q 77 A 945a 946b Q 88 A 1 1000d 1001d A 3 1002d 1004b Q 91 A 1 1016b 1017c
21 DANTE *Divine Comedy* HELL, VI [94 115] 9b ARAD SE XIX [100-148] 136a c
22 CHAUCER *Pa son s Tale* pa 10 498b 499b
23 HO S *Lev athan* PART I 179d 197 230a 244b-c PART IV 248a b 251c 252b 254b c
32 MI TON *Ch ists N tu ty* [125-172] 4b 5b / *At a Solemn Mus k* 13a b / *Parad se Lost* BK III [274 343] 141b 143a K VI [139-173] 220a 221a BK XI [45-83] 300a 301a K XII [451 465] 329a [537 557] 331a / *A op tica* 404a b
33 PASCAL *Pensé s* 757 321a
35 LO KE *T lerati n* 17a b
40 GIBBON *Decline and Fall* 187c 188
41 GIBBON *Decl e and F ll* 233c 234d
52 DOSTO VSKY *Br thers Karama ov* BK I 13c d K V 127b 137c

5 The criticism nd rejection of prophecy the distinct on between tru and f lse proph cy the condemnation of strol ogy and divination as impiety or supe t tion

OLD T STAM NT *Exodus* 7 10-13 22 / *Deuter o omy* 3 5 18 5 2 / *I Samuel* 8 1—(D) *I K ngs* 28 1-10 / *I K g* 3 11 34 18 17 40 22 5 25—(D) *III Ki gs* 13 34 18 7-40 22 5-25 / *II K gs* 17 17—(D) *IV Ki g* 17 17 / *I Chr cles* 10 13 14—(D) *I Pa al pomenon* 13 14 / *II Ch onicl s* 18—(D) *II Paral p menon* 8 / *I ah* 8 8-22 30 9- 41 21 29 47 13—(D) *Isa s* 8 18 22 3 9-11 41 2 9 47 12-13 / *Jere m* / 2 8 5 1 14 31 4 13 16 23 9 40 27 9-18 28 9 8-9 29 32 36-38 esp 37 18-—(D) *Jerem as* 8 5 12 4 3 14 3 6 23 9-4 7 9-18 28 29 8-9 29-32 36-38 esp 37 7 9 / *E kiel* 13 14 9 21 2 3 2 23 3 —(D) *Ezech el* 3 4 9 21 1 3 2 23 31 / *Da l* 9-2 2 1 23 4 27 5 5 7 / *M h* 3 5 2—(D) *Mich as* 3 5 2 / *Z h i h* 13 6—(D) *Zach rias* 0 2 3 -6
APO R HA *W i dom of Solomo* 14 27 29—(D) OT *B k f W dom* 14 27 9 / *Eccl s t cu* 34 1 7—(D) OT *E cl siast s* 34 7
N W T TAM ENT *M tthew* 7 15-23 38 40 13 54-57 16 1 4 23 29-39 3-5 / *M k* 6 1-5 8 - 3 / *Luke* 6 6 11 6 9 / *J hn* 4 44 / *II P ter* 3 / *I J hn* 4 -6

The criticism and rejection of prophecy: the distinction between true and false prophecy; the condemnation of astrology and divination as impiety or superstition)

4 Homer *Iliad* BK XII [195-250] 84a-d / *Odyssey* BK II [146-207] 189c-190b
5 Aeschylus *Agamemnon* [248-254] 54d [1178-1213] 64c-65a
5 Sophocles *Oedipus the King* [300-512] 102a-103d [702-725] 105d-106a / *Antigone* [1155-1171] 140d-141a
5 Euripides *Helen* [744-760] 305b / *Iphigenia Among the Tauri* [570-575] 416a / *Iphigenia at Aulis* [948-960] 433d-434a
5 Aristophanes *Knights* [108-233] 471b-472d [941-1099] 481d-483d / *Peace* [1039-1126] 537d-539a / *Birds* [959-991] 554c-555a
6 Herodotus *History* BK I 10c BK II 86c BK III 116a-b BK VIII 273b-c
6 Thucydides *Peloponnesian War* BK II 389a-b BK V 489a-b 506b
7 Plato *Timaeus* 466d-467b
8 Aristotle *Prophesying* 707a-709a,c
12 Lucretius *Nature of Things* BK I [80-135] 2a-d
12 Epictetus *Discourses* BK II CH 7 145b-146a
12 Aurelius *Meditations* BK I SECT 6 253b
14 Plutarch *Pericles* 123c-124a 138d / *Alexander* 575a-576a / *Marcus Brutus* 816d-817c
15 Tacitus *Annals* BK IV 79b BK VI 91a-d BK XII 121d / *Histories* BK I 191d-194a,b 195b-c BK IV 274b 283b BK V 298b-c
18 Augustine *Confessions* BK IV par 4-6 20a-d BK VII par 8-10 45d-47a / *City of God* BK V CH 1-7 207d-212c CH 9 213b-c BK VI CH 35 263c-264a,c BK XVIII CH 41 496b-c BK XIX CH 23 525c-528a / *Christian Doctrine* BK II CH 21-24 647a-649a
19 Aquinas *Summa Theologica* PART I Q 115, A 3, REP 4 588c-589c A 4-6 589d-592d PART I-II Q 9, A 5 660d-662a
21 Dante *Divine Comedy* HELL XX 28b-29d
22 Chaucer *Troilus and Cressida* BK V STANZA 52-55 127a-b STANZA 183-185 144a-b STANZA 218 148b / *Parson's Tale* par 38 522b
23 Hobbes *Leviathan* PART I 80d-81d 82b PART III 165d-167b 183b-d 186c-188a 190a-b
24 Rabelais *Gargantua and Pantagruel* BK I 66b-67d BK II 82c-d BK III 158b-171a 173d-175c 215c-219b
25 Montaigne *Essays* 18d-20d 94d-95a 98b-99a 284d-285b
26 Shakespeare *Romeo and Juliet* ACT I, SC IV [35-114] 290d-291d
27 Shakespeare *King Lear* ACT I, SC II [112-166] 249a-c / *Macbeth* ACT V, SC VIII [9-2?] 310a-b
29 Cervantes *Don Quixote* PART II, 381a-b
30 Bacon *Advancement of Learning* 54c-55a
31 Descartes *Rules*, V 7d-8a
33 Pascal *Pensées* 173 203b-204a 597-59? 278b-279a 817-818 330b-331b 835 334b
35 Hume *Human Understanding* SECT X DIV 94 492d-493c
36 Sterne *Tristram Shandy* 217b-221a 332-334b
38 Rousseau *Social Contract* BK II 401d-402a
40 Gibbon *Decline and Fall* 3c 52b 93? 121a-b 170b-c 223c-d 460b 463b 8?
[n 51]
46 Hegel *Philosophy of History* PART I 217b-... PART III 311a PART II 263d 265c 273b-c
48 Melville *Moby Dick* 232a-235a
54 Freud *Interpretation of Dreams* 387a-c / *General Introduction* 467a-b / *New Introductory Lectures* 822b-825c

CROSS-REFERENCES

For Other discussions of man's knowledge of the future by natural or supernatural means, *see* Fate 5-6; Knowledge 5a(5); Necessity and Contingency 4c; Time 6f; Truth 3b(3).
Another consideration of the religious significance of prophecy and its fulfillment, *see* Religion 1b(3).
Other discussions of the interpretation of oracles, omens, portents, and visions, *see* Language 10; Memory and Imagination 8a; Sign and Symbol 5b; and for other treatments of dreams and their meaning, *see* Language 10; Memory and Imagination 8d-8d( ); Sign and Symbol 6a.
The religious dogmas related to particular prophecies in Judaism and Christianity, *see* God 7h; 8b; 8c; 9f; World 8.

ADDITIONAL READINGS

Listed below are works not included in *Great Bo ks of the W estern World* but relevant to the idea and topics ith wh ch this chapter deals These works are divided into t o groups

I Works by authors rep esented in th s collect on
II Works by authors not rep esented in this collection

For the date place and ther facts concerning the publication of the w rks cited consult the B bliography of Additional Readings which follows the last chapter of *The Great Id as*

I

P UT CH Wherefo the Pythian Priestess Now Ceases to Deliver Her Oracl s in Verse Why the Oracle Cease to G ve Answer in *Moral a*
AUGUSTIN *De Genesi d Litteram* BK XII CH 9
—— *On the Spirit a d the Letter*
AQUINAS *Qu est nes D putatae De Veritate* Q 2
—— *Summa Theolog ca* PART I – I QQ 71–175
F B CON Of Prophecies in *Essays*
S INOZ *Tract tus The l gico Pol t cus* (*Theolog i l Pol tical T tise*) CH 1–3 I
NEWTON *Da iel and th Apocalypse*

II

C CERO *De Divi at e* (*On D inat n*)
TERTULLIAN *Th Pr script Aga nst Heret cs*
S ADIA GA N *The Book of Beliefs nd Opin ons* TREATI E III VIII
MAIMONID *Eight Chapters on Ethics* CH 7
—— *The Guide for th Perplexed* PART II CH 3 -47
CA DE ÓN *Lif Is a Dream*
J TAYLOR *A Discourse f the Liberty of Pr ph sying*
FONTENELLE *Histo des ora le*
LEI NITZ *New Essays C ncerning Human Under st nd ng* K IV CH 19
VOLT IRE Prophecies Prophets in *A Ph lo soph cal Dict nary*
PA NE *The Age of R ason* P RT I
J H N WMAN *Lectures o the P ophet cal Office of the Church*
KI RKEGAARD *Of the D ff rence B tween a Genius d an Ap tl*
COMT *Sy t m of P s tive P l ty* VOL I *Theory of the Future of M*
W R S ITH *The Proph ts of Isra l and Th ir Place i History*
FRAZER *P y he s Ta k*
LODS *Th Prophets and the Rise of Judaism*

Chapter 73 PRUDENCE

INTRODUCTION

Of the qualities or virtues attributed to the intellect prudence seems to be least concerned with knowledge and most concerned with action When we call a man a scientist or an artist or praise the clarity of his understanding we imply only that he has a certain kind of knowledge We admire his mind but we do not necessarily admire him as a man We may not even know what kind of man he is or what kind of life he leads It is significant that our language does not contain a noun like scientist or artist to describe the man who possesses prudence We must use the adjective and speak of a prudent man which seems to suggest that prudence belongs to the whole man rather than just to his mind

Prudence seems to be almost as much a moral as an intellectual quality We would hardly call a man prudent without knowing his manner of life Whether he behaved temperately would probably be much more relevant to our judgment of his prudence than whether he had a cultivated mind The extent of his education or the depth of his learning might not affect our judgment at all but we probably would consider whether he was old enough to have learned anything from experience and whether he had actually profited from experience to become wise

These observations not only express the ordinary sense of the word prudence but also give a summary indication of the idea for which that word stands in the great books Like other fundamental traits of mind or character prudence is considered by the poets and historians in terms of precept and example For the definition of the term or for an analysis of its relation to other fundamental ideas such as virtue and happiness desire and duty one must go to the great works of moral and political theory or of theology

Even there however the conception of prudence is used more frequently than it is expounded Plato Aristotle Aquinas Hobbes and Kant seem to be the exceptions and of these only Aristotle and Aquinas offer an extended analysis—Aristotle in his book on intellectual virtue in the *Ethics* Aquinas in certain questions of his Treatise on Habits in the *Summa Theologica* but more extensively in his Treatise on Prudence (see the questions from the *Summa Theologica* cited in the list of Additional Readings)

THAT PRUDENCE IS NOT knowledge in the ordinary sense of the term—that it is a product of experience and a possession of reason which unlike science or art cannot be expressed in propositions—seems to be clearly implied by Hobbes When the thoughts of a man that has a design in hand running over a multitude of things observes how they conduce to that design or what design they may conduce to if his observations are such as are not easy or usual this wit of his is called Prudence and depends on much experience and memory of the like things and their consequences heretofore

Whereas science can achieve some certainty the judgments of prudence are according to Hobbes all uncertain because to observe by experience and remember all circumstances that may alter the success is impossible It is the opposition between experience and science which seems to lead Hobbes to distinguish prudence from wisdom As much experience is prudence so is much science sapience For though we usually have one name of wisdom for them both yet the Latins did always distinguish between *prudentia* and *sapientia* ascribing the former to experience the latter to science

The Greeks also had two words—*phronesis*

and *sophia*—both of which are sometimes translated in English by wisdom But Aristotle like Hobbes insists upon the distinction between the wisdom which is the ultimate fruit of the speculative sciences or philosophy and the wisdom which belongs to the sphere of moral and political action Wishing to preserve Aristotle s sense that *phronesis* and *sophia* have something in common which deserves the eulogistic connotation of wisdom his translators usually render these words in English by the phrases practical wisdom or political wisdom (for *phronesis*) and speculative wisdom *or philosophical wisdom (for sophia)* The English rendering of Aquinas on the other hand usually translates his *prudentia* by prudence and his *sapientia* by wisdom

Whether it is permissible to use prudence and practical wisdom as synonyms may be more than a question of verbal equivalence for there is a fundamental issue in theory concerning the unity of wisdom on which Plato differs from both Aristotle and Aquinas The question about the relation of knowledge and virtue may be differently answered according to the view of wisdom which denies its division into speculative and practical and according to the view which conceives the possibility that a man may be wise in one way without being wise in the other In the language of Aquinas a man may have acquired wisdom through science and understanding without having the moral character *of a prudent man*

That practical wisdom is not scientific knowledge is evident Aristotle declares This is confirmed he adds by the fact that while young men become geometricians and mathematicians and wise in matters like these it is thought that a young man of practical wisdom cannot *be found The reason is that such wisdom* is concerned not only with universals but with particulars which become familiar from experience but a young man has no experience for it is length of time that gives experience

Hobbes and Aristotle seem to agree that experience is important for the development of prudence or practical wisdom precisely because it is practical and practice is concerned with particulars. But though both also agree that this explains the distinction between prudence and scientific knowledge—which is concerned not with action but with the nature of things—Aristotle alone raises a further question about the distinction between practical wisdom and art

In making something the artist also deals with particulars In this sense art is also practical But according to Aristotle the word productive should be used in distinction from practical to signify the difference between making and doing—two kinds of human activity which though alike as compared with scientific knowing represent knowledge differently applied The knowledge which the artist possesses can furthermore be formulated in a set of rules An individual can acquire the skill of an art by practicing according to its rules. What a man knows when he is prudent seems to be much less capable of being communicated by precept or rule What he knows is how to deliberate or calculate well about things to be done

This in Aristotle s view marks prudence [illegible] from all other virtues That prudence is a [illegible] ity of mind seems to follow from the fact [illegible] it involves deliberation a kind of [illegible] about variable and contingent [illegible] the same sort which belong to the [illegible] opinion That prudence is also a moral [illegible] an aspect of character seems to follow [illegible] from Aristotle s statement that [illegible] deliberation about the means to any [illegible] but only about those which [illegible] *good life in general*

PRUDENCE IS NOT
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with regard [illegible]

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conceives [illegible]

to God When the event answers expectations the prediction is attributed to prudence yet human foresight being fallible it is but presumption For the foresight of things to come which is Providence belongs only to him by whose will they are to come Aquinas gives a quite different reason for saying that prudence or providence may suitably be attributed to God It is that the ordering of things toward their ultimate end is the chief part of prudence to which two other parts are directed —namely remembrance of the past and understanding of the present inasmuch from the remembrance of what is past and the understanding of what is present we gather how to provide for the future

Prudence is sometimes described not as a virtue of the mind or even as the power of foresight but as a temperamental trait an emotional disposition It is associated with timidity or caution in those who are fearful of risks or unwilling to take chances It is in this sense that Bacon seems to oppose hopefulness to prudence which is diffident upon principle and in all human matters augurs the worst The cautiousness of the over deliberate man may involve thought as well as fear Hamlet thinks too much and on too many sides of every action His action being sicklied o er by the pale cast of thought he is irresolute He laments his misuse of reason Whether it be bestial oblivion or some craven scruple of thinking too precisely on the event—a thought which quartered hath but one part wisdom and ever three parts coward—I do not know why yet I live to say this thing s to do since I have cause and will and strength and means to do it

When prudence is conceived as excessive caution its opposite is usually described as rashness precipitateness or impetuosity Thucydides portrays these opposites in the persons of Nicias and Alcibiades Their speeches to the Athenian assembly on the question of the Sicilian expedition do not merely present an opposition of reasons for and against the undertaking but also represent an opposition of types of human character Both come to grief Nicias the overcautious leader of the expedition who earns a not inevitable defeat by his ever-delaying tactics and Alcibiades who does not stop at treachery or treason when the moment seems ripe for action which if quickly taken may succeed

Aristotle and Aquinas would use such facts to argue against what in their view is the misconception of the prudent man as the opposite of the impetuous The prudent man in their opinion does not stand at the other extreme of undue caution In their theory of the virtues as means between extremes of excess and defect prudence like courage or temperance represents a mean consisting in neither too much nor too little As cowardice and foolhardiness are the opposite vices of too much and too little fear—and as both are opposed to the mean of courage which involves a moderation of fear—so excessive caution and impetuosity are the vices opposed to prudence as well as to each other

Nor are prudence and imprudence simply matters of temperament Men may differ in their temperamental dispositions but according to Aristotle and Aquinas, these are not to be confused with virtues and vices One man may be by nature more fearful or fearless than another but regardless of these differences in emotional endowment either may become courageous by forming the habit of controlling fear for the right reasons So too, one man may be naturally more impulsive or more circumspect than another but either can acquire prudence through learning to take sufficient counsel and to deliberate enough before action, while also forming the habit of resolving thought into action by reaching decisions and commanding their execution Failing to satisfy these conditions of prudence either may develop the vices of imprudence becoming like Hamlet or Nicias irresolute or like Alcibiades impatient of counsel or ill advised lacking care in deliberation and soundness in judgment

THE CONCEPTION OF prudence as itself the extreme of caution whether temperamental or habitual is not the only challenge to the Aristotelian theory of prudence as a virtue Other moralists especially those who take a different view of virtue generally do not seem to look upon prudence as wholly admirable Even when they do not condemn prudence as an indisposition to act promptly or decisively

enough they seem to give prudent deliberation the invidious connotation of cold and selfish calculation

A suggestion of this appears in Mill s contrast between duties to ourselves and duties to others wherein he remarks that the term duty to oneself when it means anything more than prudence means self respect and self development It would seem to be implied that prudence means something less—something more selfish—than a proper and justifiable self interest the violation of which involves a breach of duty to others for whose sake the individual is bound to have care for himself

Kant more explicitly than Mill associates prudence with exped ency and self seeking and separates it from action in accordance with duty under the categorical imperative of the moral law Prudence has meaning only in relation to a hypothetical imperative which expresses the practical necessity of an action as a means to the advancement of happiness Granted that a man seeks his individual happiness then skill in the choice of means to his own greatest well being may be called *prudence* Consequently the imperative which refers to the choice of means to one s happiness i e the precept of prudence is still always hypothetical the action is not commanded absolutely but only as a means to another purpose or as Kant says elsewhere the maxim of self love (prudence) only *advises* the law of morality *commands* Furthermore he holds that what *duty* is is plain of itself to everyone but what it is to bring true durable advantage such as will extend to the whole of one s existence is always veiled in impenetrable obscurity and much prudence is required to adapt the practical rule founded on it to the ends of life even tolerably by making exceptions

In terms of Kant s division of the imperatives of conduct into the pragmat c and the moral according as they refer to welfare and happiness or duty and law prudence is merely pragmatic It does not belong to morality The pragmatic imperative of prudence is more like the technical imperative of art which is also conditional and concerned with determining means to an end—in this case the thin to be produced by skill If it were only equally easy to give a definite conception of happiness the imperatives of prudence would correspond exactly with those of skill

As Kant sees it the sole business of reason in the moral philosophy of prudence is to bring about a union of all the ends which are aimed at by our inclinations into one ultimate end—that of *happiness* and to show the agreement which should exist among the means of attaining that end In this sphere accordingly reason cannot present to us any more than *pragmatical* laws of free action for our guidance towards the aims set up by the senses and is incompetent to give us the laws which are pure and determined completely *a priori* Hence the precepts of prudence are used by reason only as counsels and by way of counterpoise against seductions to an opposite course

The issue between Kant and Aristotle (or Aquinas) with respect to prudence thus appears to be part of the larger issue between them on the fundamental principles of morality discussed in the chapters on DUTY and HAPPINESS In Kant s view Aristotle and Aquinas no less than Mill are pragmatists rather than moralists They are all utilitarians in the sense that they regard happiness as the first principle of human conduct and concern themselves with the ordering of means to this end Since the consideration of means ne essarily involves the weighing of alternatives as more or less expedient prudence becomes indispensable to the pursuit of happiness The choice of the best means is second in importance only to the election of the right end

Kant admits that those who live for happiness require a great deal of prudence in order to adapt practical rules to variable circumstances and to make the proper exceptions in applying them None is required by those who live according to the moral law The moral law commands the most punctual obedience from everyone it must therefore not be so difficult to judge what it requires to be done that the commonest unpracticed understanding even without worldly prudence should fail to apply it rightly That the principle of *private* happiness is the direct oppo t of the principle of moral ty Kant seems to th nk is evident from the questionable worth of prudence for a man must hav a different crit

tion when he is compelled to say to himself I am a *worthless* fellow though I have filled my purse and when he approves himself and says I am a *prudent* man for I have enriched my treasure

Kant does not limit his criticism of prudence as pragmatic—or practical rather than moral—to the fact that it serves what h calls private happiness It may serve the public welfare A history is composed pragmatically he writes when it teaches *prudence i e* instructs the world how it can provide for its interests better But he also distinguishes between worldly and private prudence The former is a man s ability to influence others so as to use them for his own purposes The latter is the sagacity to combine all these purposes for his own lasting benefit Nevertheless the pru dence which aims at individual happiness is primary for when a man is prudent in the former sense but not in the latter we might better say of him that he is clever and cunning but on the whole imprudent

THOSE WHO TAKE THE view that happiness is the first principle of morality would still agree with Kant that the man who is skillful in exer cising an influence over other men so as to *use* them for his own purposes is clever or cunning rather than prudent Hobbes for example says that if you permit to prudence the use of un just or dishonest means you have that Crooked Wisdom which is called Craft Aristotle goes even further in his insistence that it is impossible to be practically wise without being good or as the same point is made in the language of Aquinas one cannot have prudence unless one has the moral virtues since prudence is right reason about things to be done to which end man is rightly disposed by moral virtue

To be able to do the things that tend to wards the mark we have set before ourselves is according to Aristotle to be clever If the mark be noble the cleverness is laudable but if the mark be bad the cleverness is mere smartness Hence the man of prudence has a certain cleverness but the clever man who is merely smart cannot be called practically wise By this criterion the cle er th ef who plans and executes a successful robbery the shrewd busi nessman who without regard to justice cal culates well how to maximize his profits or Machiavelli s prince who exercises cunnin to get or keep his power exhibits not prudence but its counterfeits In some cases the clever ness or shrewdness may simulate prudence without involving the knavery of craft or cunning Some men have what Aquinas con ceives as artistic (or technical) rather than moral prudence Those who are good coun sellors in matters of warfare or seamanship are said to be prudent officers or pilots but not simply prudent Only those are simply p dent who give good counsel about all the concerns of life

Aristotle and Aquinas make the relatio be tween prudence and moral virtue reciprocal The moral virtues depend for their forma and endurance as much upon pruder as prudence depends upon them Virtu makes us aim at the right end Aristotle writes and practi al wisdom makes us take the ght means The rightness of the means re uires not merely that they be adapted to an end but that the end itself be right The ri ht end can not be achieved unless the means to it be ri ht ly chosen Hence no skill of mind in del berat ing about and choosing means is truly the intellectual virtue of prudence unless the man who habitually calculates well is also habitually inclined by the moral virtues to choose things for the right end whether that be happiness or the common good of society

Conversely the moral virtues depend upon prudence because in Aristotle s view they are formed by the making of right choices His definition of moral virtue names prudence a an indispensable cause Since the mean between extremes in which the virtues consist is in most cases subjective or relative to the ind vidual it cannot be determined by objective measurements Reason must determine it by a prudent consideration of the relevant circum stances

The interdependence of prudence and the moral virtues seems to be the basis for both Aristotle and Aquinas of the insight that it is impossible to have one moral virtue without having all On this basis Aristotle says we can refute the dialectical argument that the virtues exist in separation from one another

As no moral virtue can exist apart from prac tical wisdom so with it all must be present

Aquinas mentions another intellectual virtue as indispensable to the moral virtues namely the virtue of understanding which consists in knowing the first principles in practical as well as speculative matters The first principles of the practical reason (i e the precepts of the natural law) underlie prudence as well as the moral virtues Just as sound reasoning in specu lative matters proceeds from naturally known principles so also does prudence which is right reason about things to be done Never theless though prudence and the moral virtues depend upon it Aquinas does not include understanding—as he does not include art science and wisdom—in his enumeration of the four cardinal virtues cardinal in the sense of being the virtues indispensable to a good human life

THESE MATTERS especially the interconnection of the virtues and the theory of the cardinal virtues are discussed in the chapter on VIRTUE The problem of the relative worth of the moral and the intellectual virtues is also considered there and in the chapter on WISDOM where the contributions to happiness of prudence and wisdom—or of practical and speculative wis dom—are specifically compared

Here there remains to be considered the Socratic conception of the relation between knowledge and virtue for there seems to be an issue between his theory of this matter and the foregoing view of the relation between pru dence and the moral virtues

In the *Meno* Socrates argues that whatever a man desires or chooses he either knows or deems to be good The man who chooses some th ng evil for himself does not do so knowingly but only through the mistake of deeming that which is in fact evil to be advantageous or good Except for such mistakes no man says Socrates wills or chooses anything evil Apart from error or ignorance evil is never voluntarily chosen Hence if virtue consists in willing or desiring things which are good and in having the po ver to ga n them it would seem to follow that knowledge of the good is closely related to its practice

Subsequently Socrates suggests that if there be any sort of good which is distinct from knowledge virtue may be that good but if knowledge embraces all good then we shall be right in thinking that virtue is knowledge To test these hypotheses he proceeds to con sider the various things which—whether or not they are the same as virtue—are like virtue in being advantageous to men None of these things such as courage or temperance seems to profit men unless accompanied by what in English translations is sometimes called wis dom and sometimes prudence

Socrates points out that everything the soul attempts when under the guidance of wisdom —or prudence— ends in happiness but in the opposite when under the guidance of folly —or imprudence If then he says virtue is a quality of the soul and if it be of necessity always advantageous then virtue must be wisdom or prudence since none of the things of the soul are either advantageous or hurtful in themselves but they are all made advantageous or hurtful by the addition to them of prudence or imprudence —wisdom or folly From this says Socrates we can con clude that prudence is virtue either the whole of virtue or some part of it at least —or as this is sometimes translated virtue is either wholly or partly wisdom

In the light of his own view that all the moral virtues depend on practical wisdom Aristotle criticizes the Socratic position Socrates in one respect was on the right track while in another he went astray In thinking that all the virtues were forms of practical wisdom he was wrong but in saying that they implied practical wis dom he was right Socrates thought the virtues were rules or rational principles while we think they involve a rational prin ciple Similarly in considering the question whether there can be moral without intellec tual virtue Aquinas writes Although virtue be not right reason as Socrates held yet not only is it *according to right reason* insofar as it inclines a man to do that which is in accord with right reason as the Platonists maintained but it also needs to be *joined with right reason* as Aristotle declares

Aquinas furthermore interprets the opinion that every virtue is a kind of prudence which he attributes to Socrates as meaning

that when a man is in possession of knowledge he cannot sin and that everyone who sins does so through ignorance This he says is based on a false supposition because the appetitive faculty obeys the reason not blindly but with a certain power of opposition Nevertheless there is some truth in the saying of Socrates that so long as a man is in possession of knowledge he does not sin provided that this knowledge involves the use of reason in the individual act of choice

Whether those who criticize the position of Socrates accurately perceive his intention and state the issue fairly are problems of interpretation as difficult as the question of where in this matter the truth lies If Socrates is saying that a man will do good if he knows the good what sort of knowledge is implied—knowledge of the good in general or knowledge of what is good in a particular case? Do both types of knowledge of the good lead as readily or surely to good or virtuous action?

Whether or not in addition to knowledge a good will or right desire is essential it may be held that prudence is required to apply moral principles—aiming at the good in general—to particular cases There exists no moral system writes Mill under which there do not arise unequivocal cases of conflicting obligation These are the real difficulties the knotty points both in the theory of ethics and in the conscientious guidance of personal conduct They are overcome practically with great or less success according to the intellect and virtue of the individual Mill seems to imply that both prudence and virtue are essential to good action on the level of particulars and that without them the kind of knowledge which is expressed in moral principles does not necessarily lead a man to act well

One other problem of interpretation must be mentioned It occurs with respect to Aristotle s statement concerning diverse modes of prudence

Political wisdom and practical wisdom are the same state of mind he writes but their essence is not the same Of the wisdom concerned with the city the practical wisdom which plays a controlling part is legislative wisdom while that which is related to this as particulars to their universal is known by the general name of political wisdom Practical wisdom also is identified especially with that form of it which is concerned with the individual man and this is known by the general name practical wisdom Of the other kinds, one is called domestic another legislative a third political and of this last one part is called deliberative and the other judicial

Does this mean that skill of mind in determining the best means to an end is different according to differences in the end—whether the happiness of an individual or the common good of a society? Does it mean furthermore, that the prudence involved in managing a household is different from the prudence concerned with political affairs and that in the state the prudence of the ruler (prince or statesman) is different from the prudence of the ruled (subject or citizen) because the one moves on the level of general laws the other on the level of particular acts in compliance with law? Within the sphere of jurisprudence or the prudence of laws is the prudence of the legislator or lawmaker different from the prudence of the judge who applies the law?

In his Treatise on Prudence Aquinas answers these questions affirmatively He distinguishes between private domestic and political prudence and within the political sphere places special emphasis upon what he calls reignative prudence the sort of prudence Dante calls a kingly prudence which sets the prince apart from ordinary men. Hobbes on the other hand asserts that to govern well a family and a kingdom are not different degrees of prudence but different sorts of business no more than to draw a picture in little or as great or greater than life are different degrees of art

This issue is intimately connected with the problem of the forms of government If only a few men are fitted by nature to acquire the special mode of prudence which is reignative or legislative would not government by the few or by the one seem to be naturally best? If however in a republic those who are citizens rule and are ruled in turn should not each citizen have the prudence requisite for both tasks whether it be the same or different? Finally if the democratic theory is that all men

are capable of being citizens—though not all perhaps are equally eligible for the highest public offices—must not political prudence be conceived as attainable by all men?

The question remains open whether those who deserve the highest magistracies have a special mode of reignative prudence or merely a higher degree of the same prudence by which they govern their private lives and their domestic establishments or as Hobbes suggests have other abilities whereby they can apply the same prudence to a different kind of business

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in beavy type which are the volume and page numbers of the passa es referred to For example in 4 HOMER *Iliad* BK II [65 283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the pas sa e is in sect on d of page 12

PAGE S CTIONS When the text is printed in one column the letters a and b refer to the upper and lower halves of the page For example in 53 JAMES *P ychology* 116a 119b the passage begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the pa e the letters c and d to the upper and lo er halves of the right hand s de of the page For example in 7 PLATO *Symposium* 163b 164c the passage beg ns in the lo er half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S D VISIONS One or more of the main divisions of a work (such as ART BK CH S CT) are somet mes included in the reference line numbers in brackets are given in cer tain cases g *Il d* BK II [265 283] 12d

BIBLE REFERENCES The references are to book chapter and verse When the King James and Douay vers ons differ in title of books or in the numbering of chapters or verses the King Ja nes vers on is cited first and the Douay ind ated by a (D) follo s e g OLD TESTA MENT *Nehem h* 7 45—(D) *II Esd as* 7 46

SYMBOLS The abbrev ation esp calls the reader s attention to one or more especially rele ant parts of whole reference pass m signifies that the topic is discussed intermit tently rathe than continuously n the work or passage cited

For addit on l information concerning the style of the references see the Explanation of Reference Style f general guidance in the use of *The Gre t Ideas* consult the Preface

1 The nature of prudence as practical wisdom v tue or quality of the deliber tive mind

APOCRY H *E les t us* 1 4 19 22 34 9-10 —(D) OT *Eccles sticu* 1 4 19H9 34 9-10

6 T UCYDIDES *Pelopon a War* BK I 383d 384a

7 PLATO *Cl a mides* 7b c / *Protagoras* 43a b / *Men* 183d 184c 188b 189d

8 ARISTOTLE *Topi* BK IV CH 2 [121b24-122a2] 169d 170a

9 ARISTOTLE *Eth cs* K I CH 13 [1103 4-] 348c d BK VI C 5 389 c H 7 390a d esp [1141b8 3] 390c d / *Rh tor* K I CH 9 [1366b20-23] 609a b

12 EP CTETUS *D ou s s* BK I H 105 106c BK II CH 5 142c 144 CH 23 170a 172d K III CH 2 177c 178d CH 10 185d 187a K IV CH 5 228a 230b

12 AUR LIU *Med t t ns* K II E T II 258a b BK V SECT 9 270b-c SE T 34 273 BK VI SECT 12 274c BK I ECT 16- 7 286d S CT 48 289c

18 AUGUSTINE *C ty f God* BK XIX CH 4 512a / *Ch istian Doct ine* K III CH 10 662a

20 AQUINAS *Summa Theolog ca* PA T I II Q 56 A 3 ANS 31a 32b Q 57 AA 4-5 38a 40a Q 58 A R P I 42a 43a A 3 REP I 43b 44 Q 65 A I 70b 72a PART I II Q 181 A 2 617d 618c

22 CHAUCER *Tale of Mel beus* 401a-432a

23 HOBBES *Levi th* PART I 53c 54a 60c 67d 68 84c d

24 RABELAIS *Ga gantua and Pantagruel* BK III 201b c

25 MONTAIGNE *Essays* 520b c

30 BACON *Advancem t of Learning* 42a-c 81d 95b

37 FIELDING *Tom Jones* 395a 396a

38 ROU SEAU *Inequal ty* 349b

42 KANT *Fund P i Metaphysic of Morals* 261c d 266b c esp 266b d [fn 1] 267b d / *Pra t l R on* 305d 339b d 361c d / *P f Metaphysical Elements of Ethics* 376c 377d

46 H L *Philosophy of Right* PART III par 191 66b

49 DARWIN *Descent of M n* 315b c

51 TOLSTOY *War a d Peace* K X 424a-c

53 J ES *Psychology* 13a 15a passim

2 The place of prudence among the virtues of the mind

2 Practical or polit cal wisdom distinguished from speculative or philosophical w s dom

7 PLATO *Statesman* 581c 582a / *Phil bus* 633a 635b
9 A ISTOTLE *Ethics* BK I CH 8 [1098b24 26] 344b BK VI CH I [1138b17]-CH 3 [1139b 8] 387a 388b CH 7-8 390 391c CH II [1143b 4]-CH 12 [44 36] 393b 394a CH 13 [1145 6-12] 394d / *Rhet ric* BK I CH II [1371b 6- 8] 615b
19 AQUINAS *Summa Theologica* PART I Q I A 6 ANS 6b 7a
20 AQ I S *Summa Theologica* PART I II Q 66 A 5 R I 79b 80c
21 DAN E *Divine Com dy* PAR D E XIII [88-4] 126b-c
23 HO BE *Leviathan* PART I 60c 61a 84c d PART IV 267a b
25 M NTAIGNE *Es ys* 327b d 520b c
30 B CON *Ad ancem nt of Learning* 4 6c 16d 17a 42 c 55b-d 65d 66a 86b c
31 DES ARTES *D scourse* PART 44 b I ART II 48b-c
34 NEWTON *Opt s* BK III 543b 544a
35 LOCKE *Human U dersta d g* INTRO S CT 5-6 94b-95a
35 HUME *H ma Understa ding* S CT I D V I-5 451 -453b
38 ROU S U *P lit l Ec omy* 373c 374a
42 KANT *Pu Rea n* 60b 190 191a / *F nd Prin Metaphys f Morals* 260d 261d 266 d 271 -c / *P a t l Reas n* 291 296d 319 321b 329a 330c / *I tro Metaphy of M als* 388a d 390b d 391 / *Judgement* 461a-475d esp 463 464 474b 475d
43 MILL *Repr ent tu Government* 346c 347a
46 H G L *Ph l ophy of Right* PREF 4b 7a

b Prud nce di tingu hed from rt action or doing contrasted w th production or making

7 PLATO *Charm des* 5c 6d / *Ph lebus* 633a 635b
9 A I TOTLE *Ethics* BK VI CH [39 32 b5] 388a H 4 [114 I]-CH 6 [41] 388d 389d CH 12 [143b 7 I 44 6] 393b
19 AQUIN S *S mm The log c* PA T I Q 34 A I RE 3 768c 769d
20 AQU N S *S mm Th olog* PART II Q 56 A 3 ANS 31a 32b Q 57 A 4 38a 39 A 5 RE I 3 39 -40a Q 58 A 2 R I 42a-43a A 5 REP 2 44d-45c Q 65 A I R 4 70b-72a
30 B ON *Ad ancement of Learning* 42 -c
42 KAN *Fu d Prin M t phy c of M r ls* 266c d / *I t M taphysic f Mo ls* 388a-d / *Judgement* 515b-c 523d 524

2c The relation of prudence to intuitive reason or to the understand ng of the natural law the moral pe ception of part culars

9 ARISTOTLE *Eth s* BK I CH 4 [095 30 b1] 340 d CH 7 [1098 35-b8] 343d 344a BK II CH 9 [109b20- 3] 355c K III CH 3 [1112b34-1113a2] 358d 359a BK VI C 5-6 389a d CH 8 [1142 12 31] 391b c CH II [1143a25 b5] 392d 393a BK VII CH 3 [1147a25 b6] 397c d
20 AQUIN S *Summa Theolog ca* PART I II Q 56 A 3 ANS 31a 32b Q 57 A 4 ANS and R 2 38a 39a A 5 REP 3 39a-40a A 6 ANS and REP 3 40a-41a Q 58 A 4 ANS 44a d A 5 ANS and REP I 44d 45c

3 The interdependence of prudence and the moral virtues the parts played by de liberation w ll and emotion in human conduct

4 HO ER *Odyssey* 183a 322d esp BK IV [65 295] 201d 202a K V [282 493] 210d 213 c BK X I 250 254d BK XIII [185 44] 257a 259d BK XVI 272a 276d
5 AESCHY US *P ometheus Bound* 40a 51d esp [259 398] 42d 44a [930-1093] 50a 51d
5 SO HOCLES *Pl iloctet* 182a 195 c esp [50-134] 182d 183c
5 EURIPID *H ppolytus* [373 387] 228b-c / *Phoen ci n Ma dens* [697 747] 384a d
6 HERODOTUS *H tory* BK VI 269c 270a
6 THUCYDID *P l ponn s n W r* K I 370a-c K II 389d 390b BK V 474a c
7 P ATO *Protago as* 48a 50d 58a 64d / *Meno* 174d 176a 183d 184d
9 AR TOTLE *Eth c* BK II H 2 [1103b27-II 4 9] 349b c CH 6 351 352d passim BK VI CH 13 393b 394d BK V I CH 9 [51a29] CH 10 [1152a24] 402b 403b BK X CH 8 [1178 16-19] 432d
12 AUR IUS *M d tat n* BK II EC 5 257b c
13 VIR *Aeneid* BK VI [18 5] 259b
19 AQU NAS *Summa Theologica* PART I Q 113 A I REP 2 576a d
20 AQU NAS *Summa Theologica* PART I Q 57 A 4 ANS 38a 39a A 5 ANS 39a 40 Q 58 AA 4-5 44 45c Q 61 54d 59d
23 HOBB *Leviath n* PART I 64 65b
25 MONTA GNE *E s ys* 20d 22 159a 162
26 SHAK S ARE *Jul u Ca r* A T II C I [60-69] 575
27 SHAKESP R *Hamlet* ACT IV SC V [32-66] 59a
29 C RVANT *Don Quixot* PART II 256 d 291d
30 B ON *Ad ement of Lea ni g* 86 95b
31 DES ARTES *Disco se* RT 48b 51b
35 LO KE *H m n U derst nd g* K CH XXI ECT 46-54 189d 192c S CT 69 196d 197a
37 F D NG *Tom Jone* 45b 395a 396a
42 KANT *F d Prin Metaphy c f M als* 260 c 261c d 266a 267d / *P actical Re on* 305d

REFERENCES

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PAGE S CTIONS When the text is printed in one column the letters a and b refer to the upper and lo ver halves of the page For example in **53** JAMES *P ychology* **116a 119b** the passage begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed n two column the letters a and b refer to the upper and lower halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the page Fo example in **7** PLATO *Sympos um* **163b 164c** the passage begins in the lo er half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One or more of the main divisions of a work (such as P RT BK CH S T) are sometimes included in the reference line numbers in brackets are given in cer tain cases *e g Il ad* BK II [265 83] **12d**

BIBL R FER NCES The references are to book chapter and verse When the Kin J mes and Douay versions differ in title of books or in the numberin of chapters or verses the King James version is c ted fir t and the Douav indicated by a *(D)* follows *e g* OLD TESTA MENT *N hem ah* 7 45—*(D) II Esdras* 7 46

S IBOLS The abbreviation esp calls the reader s attention to one or more especially relev nt parts of a whole reference passim signifies that the topic is discussed intermit tently rathe than continuously in the work or passage cited

For addit onal information concernin the style of the references see the Explanation of Referen e Style for gene al guidance in the use of *The Great Ideas* consult the Preface

1 The n ture of prudence as practic l wisdom s a virtue or quality of the deliberative m nd

APOCRYPHA *Eccl ia ti us* 4 9 22 34 9-10—*(D)* OT *Ec lesia t cu* 1 4 19 19 34 9-10

6 THUCYDID S *P lopon esian War* BK I **383d-384a**

7 PLATO *Cha m des* **7b c** / *P otago as* **43a b** / *Meno* **183d 184c 188b 189d**

8 ARISTOTLE *Topics* BK IV CH 2 [121b24-122] **169d 170a**

9 ARISTOTLE *Eth cs* BK I II 13 [103 4 10] **348 d** BK VI CH 5 **389a** CH 7 **390a d** esp [1141b8 23] **390c d** / *Rh toric* BK I CH 9 [1366b20–23] **609a b**

12 EPICTETUS *Di ou s s* K I CH I **105a 106c** BK II CH 5 **142c 144** C I 3 **170a 172d** K III CH 2 **177c 178d** C I 10 **185d 187a** K V CH 5 **228a 230b**

12 AURELIU *Med tat on* BK II SECT II **258a b** BK V SECT 9 **270b c** ECT 34 **273c** K VI S CT 12 **274** K II E T 16–17 **286d** SE T 48 **289c**

18 AU USTINE *C ty f God* BK XIX CH 4 **512a** / *Chr stian Doctrine* BK III CH 10 **662a**

20 AQUINAS *Summa Theologica* P RT I II Q 56 A 3 ANS **31a 32b** Q 57 AA 4-5 **38a 40a** Q 58 A REP I **42a-43a** A 3 REP I **43b-44** Q 65 A I **70b 72a** PART I II Q 181 A 2 **617d-618c**

22 CH UCER *Tale of Melibeus* **401a-432a**

23 HOBBES *Lei athan* PA T I **53c 54a 60c 67d 68a 84c d**

24 RAB LAIS *Gargantua a d Pantagruel* BK III **201b c**

25 MONTAIGNE *Essays* **520b-c**

30 BA ON *Ad ancement of Learning* **42a c 81d 95b**

37 F ELDING *T m Jones* **395a 396a**

38 ROU SEAU *I eq ality* **349b**

42 KANT *Fund Prin Metaphys c of Morals* **267b d** / **261c d 266b c** esp **266b d** [fn 1] / *P act l Reason* **305d 339b d 361c d** / *P ef Metaphy cal Elements of Ethics* **376c 377d**

46 HEGEL *Philosophy of R ght* PART III par 191 **66b**

49 DARWIN *Descent of Man* **315b c**

51 TO S OY *War and Peace* BK X **434a-c**

53 JAMES *Psychol gy* **13a 15a** passim

2 The place of prudence among the virtues of the mind

2a Pr ctical or political wisdom dist nguished from specul tive or philosophical wis dom

7 PLATO *Statesman* 581c 582a / *Ph lebus* 633a 635b
9 ARIST TLE *Ethics* K I CH 8 [1098b24 26] 344b BK VI CH I [1138b17]–CH 3 [1139b18] 387a 88b CH 7-8 390a 391c CH 11 [1143b14]–CH 12 [144 36] 393b 394a CH 13 [1145a6–1] 394d / *Rhet ic* K I CH 11 [1371b26–28] 615b
19 AQUINAS *Summa Theologica* PART I Q I A 6 ANS 6b 7a
20 AQUIN S *S mma The l gica* P RT I II Q 66 A 5 R P I 2 79b 80c
21 DANTE *Divine C medy* PARADISE XIII [88–104] 126b
23 HO B *Leviathan* PART I 60c 61a 84c d ART V 267a b
25 M TAIGNE *Essays* 327b d 520b c
30 B C N *Ad ancement f Le ning* 4c 6 16d 17a 42a c 55b d 65d 66a 86b c
31 DESCARTES *Disc urs* PART I 44a b PART I I 48b c
34 NEWTON *Op ics* BK III 543b 544a
35 LO KE *H ma U derst nd g* INTRO ECT 5-6 94b-95a
35 HUM *Huma U derst nd g* SECT I DIV 1–5 451a-453b
38 RO S AU *P l tical Economy* 373 374a
42 KANT *Pi e Re s n* 60b c 190c 191a / *F nd Prin Met phy c of Mo ls* 260d 261d 266c d 271a c / *Practical R a* 291a 296d 319 321b 329 330c / *Intro Metaphysic f M r ls* 388a d 390b d 391 / *Judgement* 461 -475d esp 463 464 474b 475d
43 M LL *Representativ Government* 346 347a
46 HEG L *Ph los phy of Right* PRE 4b 7a

2b Prudence d st nguish d from t act on or doing contrasted with production or making

7 PL TO *Ch rm des* 5c 6d / *Ph lebus* 633 635b
9 ARI TOTLE *Eth cs* BK VI CH [39a32 b5] 388a H 4 [14 1] CH 6 [1141 1] 388d 389d CH 12 [1 43b17 1 44a6] 393b c
19 AQUINA *S mma Theologica* ART I Q 34 A I E 3 768c 769d
20 AQUIN *Summa Theologi a* PART I II Q 56 A 3 ANS 31a 32b Q 57 A 4 38a 39 A 5 REP I 3 39 40 Q 58 A 2 REP 42a-43a A 5 REP 2 44d-45c Q 65 A I REP 4 70b-72a
30 BACON *Ad cement of Le ning* 42a
42 KANT *Fu d Prin M taphy c of Mo als* 266c d / *I tro Metaphy c f Mo ls* 388a d / *Judgement* 515b 523d 524a

2c The rel tion of prudence to intuitive reason or to the understanding of the natural law the moral perception of particulars

9 ARISTOTL *Eth s* BK I CH 4 [1095 30–b12] 340c d CH 7 [1098 35 b8] 343d 344a BK II CH 9 [1109b20–23] 355c K III CH 3 [1112b34–1 3 2] 358d 359a K VI CH 5–6 389a d CH 8 [1142 12 31] 391b c CH II [1143a25 b5] 392d 393a K VII CH 3 [147a25–b6] 397c d
20 AQUINAS *Summa Theol gica* ART I I Q 56 A 3 ANS 31a 32b Q 57 A 4 ANS and REP 2 38a 39a A 5 REP 3 39a-40a A 6 ANS and R P 3 40 41a Q 58 A 4 ANS 44a d A 5 ANS and R P I 44d 45c

3 The interdependence of prudence and the moral virtues the p rts pl yed by de liberation will and emot on in human conduct

4 HOM R *Odyssey* 183a 322d c p BK IV [265 295] 201d 202a BK V [28 493] 210d 213a c BK XII 250a 254d BK XIII [185 440] 257a 259d BK XV 272 276d
5 AESCHYLUS *Pr meth us Bound* 40a 51d esp [259–398] 42d-44a [930– 093] 50a 51d
5 S PHOCLES *Ph loctetes* 182a 195a c esp [50–134] 182d 183c
5 EURIPID S *H ppolytus* [373 387] 228b c / *Phoen cian Ma dens* [697 747] 384a d
6 HERODOTU *Hist ry* BK VIII 269c 270a
6 THUCYD DES *Pelopon esian War* BK I 370a BK 389d 390b BK IV 474a c
7 PLATO *Prot goras* 48a 50d 58a 64d / *Meno* 174d 176 183d 184d
9 ARIS OTL *Ethics* BK II CH 2 [1103b 7–1 4 9] 349b c CH 6 351 352d pas m BK VI CH I 3 393b 394d BK VII H 9 [1151a29]–CH 0 [1152a4] 402b-403b K X CH 8 [178 16–19] 432d
12 AUREL U *M d t t on* BK S T 5 257b c
13 V RGIL *Aeneid* BK VI [18 25] 259b
19 AQUIN S *Summ Theol g ca* PART Q 113 A REP 2 576 d
20 AQU NAS *Summa Theolog a* PART I–II Q 57 A 4 AN 38a 39 A 5 AN 39a 40a Q 58 AA 4-5 44a 45 Q 6 54d 59d
23 HO BES *Le i than* PART 64 c 65b
25 MON A GN *E s ys* 20d 22 159a 162c
26 SH KES RE *Jul us Ca sa* A T II SC I [60–69] 575
27 SHAKES ARE *Hamlet* A T IV SC IV [32–66] 59a
29 CER ANTES *Don Quixot* PART II 256 d 291d
30 BACON *Adv cement of Learn g* 86 95b
31 D S ARTES *D co r se* ART 48b 51b
35 LOCKE *Huma U derstand g* BK CH XXI SECT 46–54 189d 192 T 69 196d 197a
37 F DING *Tom Jo s* 45b c 395 396a
42 KANT *Fu d Prin Met phy ic f Mor l* c 261c d 266a 267d / *Pr tical*

(3 *The interdependence of prudence and the moral virtues the parts played by deliberation will and emotion in human conduct*)

307d 318c d 339b-d 341c 342a / *Intro Metaphysic of Morals* 387b
46 HEGEL *Philosophy of Right* PART II par 114 42a b / *Philosophy of History* INTRO 165a 166b
49 DARWIN *Descent of Man* 310c 313a esp 311b-d
51 TOLSTOY *War and Peace* BK V 211a 213a BK VI 235a
53 JAMES *Psychology* 13a 15a passim esp 14b 15a 794a 808a passim

3a Moral virtue as determining the end for which prudence makes a right choice of means right desire as the standard of practical truth

8 ARISTOTLE *Topics* BK III CH 1 [116b22 26] 163b
9 ARISTOTLE *Ethics* BK II CH 2 [1103b27-1104 9] 349b c BK VI CH 2 387d 388b CH 5 [1140b4 19] 389b c CH 9 [1142b17 34] 391d 392b CH 12 [1144 6-37] 393d 394a CH 13 [1144b30-1145 6] 394c d / *Politics* BK VII CH 13 [1331b24-38] 536b c
14 PLUTARCH *Pericles* 121a 122b
19 AQUINAS *Summa Theologica* PART I Q 113 A 1 REP 2 576a d
20 AQUINAS *Summa Theologica* PART I II Q 56 A 2 REP 3 30c 31a A 3 ANS 31a 32b A 4 REP 4 32b 33c Q 57 A 4 ANS 38a 39a A 5 ANS and REP 3 39a-40a Q 58 A 3 REP 2 43b 44a A 4 ANS and REP 44a d A 5 44d-45c Q 65 A 1 ANS and REP 3 4 70b 72 A 2 ANS and REP 3 72a d A 3 ANS and REP 1 72d 73d PART II II Q 181 A 2 617d 618c
25 MONTAIGNE *Essays* 52c 53
42 KANT *Pure Reason* 235a b / *Fund Prin Metaphysic of Morals* 256a b 259c 260c 266b 267d 268b 271d 279d esp 271d 272b 274d 275b / *Practical Reason* 305d 307d 318c d 357c 360d / *Pref Metaphysical Elements of Ethics* 376c 377d / *Intro Metaphysic of Morals* 387d 388a
43 MILL *Utilitarianism* 456d-457b passim
46 HEGEL *Philosophy of Right* PART I par 22 44a par 14 49b 54a

3b Prudence as a factor in the formation and maintenance of moral virtue the determination of the relative or subjective mean

7 PLATO *Protagora* 61c 62a / *Meno* 183d 184c / *Phaedo* 226a b / *Republic* BK X 439b d / *Laws* BK I 643c d
9 ARISTOTLE *Ethics* BK II CH 2 [1103b27 1104a9] 349b-c CH 6 351c 352d passim esp [1106b36-1107a2] 352c CH 9 354d 355 c BK V CH 9 [1137a5 26] 385b-c BK VI CH 5 389a c CH 9 [1142b17 34] 391d 392b CH 12 13 393b 394d BK X CH 8 [11 8 16-19] 432d
12 EPICTETUS *Discourses* BK III CH 12 18 b 188b
12 AURELIUS *Meditations* BK VI SECT 16 275b-d
18 AUGUSTINE *City of God* BK IX CH 4 28 288b
19 AQUINAS *Summa Theologica* PART I Q 13 A 1 REP 2 576a d
20 AQUINAS *Summa Theologica* PART I II Q 56 A 2 REP 2 30c 31a Q 57 A 5 39a-40a Q 58 A 2 42a-43a A 4 44a d Q 65 A 1 70b-7 a
29 CERVANTES *Don Quixote* PART II 256c-d 291d
30 BACON *Advancement of Learning* 79b-c 86b-95b
31 DESCARTES *Discourse* PART III 48b 51b
33 PASCAL *Pensées* 359 235a 378 381 238a b
37 FIELDING *Tom Jones* 45b c
42 KANT *Practical Reason* 305d 307d / *Pref Metaphysical Elements of Ethics* 365b-d 376c 377d / *Intro Metaphysic of Morals* 387d 388a
46 HEGEL *Philosophy of Right* PART II par 140 49b 54a

3c Shrewdness or cleverness as the counterfeit of prudence the abuses of casuistry

5 ARISTOPHANES *Frogs* [534-541] 570b
6 HERODOTUS *History* BK III 95d 96b BK VIII 279d 280b
6 THUCYDIDES *Peloponnesian War* BK VIII 575b d 584b 585a
9 ARISTOTLE *Ethics* BK VI CH 12 [1144 12]-CH 13 [1144b16] 393d 394b BK VII CH 10 [1152a 8 15] 403a
14 PLUTARCH *Aratus* 829b-d
20 AQUINAS *Summa Theologica* PART I II Q 58 A 4 REP 2 44a d Q 93 A 6 REP 2 219d 220d
21 DANTE *Divine Comedy* HELL, XXVII [55 136] 40a-41b
23 MACHIAVELLI *Prince* CH XVIII 25a b
23 HOBBES *Leviathan* PART I 68a
27 SHAKESPEARE *Othello* ACT I SC III [302 410] 212b 213a
33 PASCAL *Provincial Letters* 27a 127a
36 SWIFT *Gulliver* PART II 75b-76a
40 GIBBON *Decline and Fall* 142c
41 GIBBON *Decline and Fall* 532d 533
51 TOLSTOY *War and Peace* BK V 204c 206a 228b 230c BK X 424a c BK XI 476c 480a

3d Prudence continence and temperance

7 PLATO *Charmides* 7a c / *Protagoras* 59b 6 b / *Meno* 183d 184c
9 ARISTOTLE *Ethics* BK I CH 13 [1103 3 1] 348c d BK III CH 12 [1119 35 b19] 366a c BK VI CH 5 [1140b11 19] 389b-c CH 9 [114- 17 34] 391d 392b BK VII CH 1 [1145 1, 19] 395c CH 2 3 395c 398a esp CH 2 [1145 21

1 46a8] 395c 396a CH 4 [1148 4 22] 398b-c CH 6 399d-400c CH 8-10 401c-403c esp CH 10 [52b7- 4] 403a b CH 11 [115 b15-18] 403d CH 12 [1153a1 3] 404c [1153a27 35] 404c d

18 AUGUSTINE *City of God* BK XIX CH 4 512a

20 AQUINAS *Summa Theologica* P RT I I Q 58 A 2 ANS 42a-43a A 3 R P 2 43b-44a Q 65 1 70b-72a

25 MONTAIGNE *Essays* 312c 314b

32 MILTON *Paradise Lost* BK XI [334 369] 306b-307 [527-551] 310b 311a / *Samson Agonistes* [38-59] 340b

38 MONTESQUI U *Sp rit of La s* BK XXVIII 259b

3e The v ces of imprudence precipitance and undue caut on

OLD TESTAM NT *Gen sis* 25 29-34 / *Proverbs* 7 6-27 14 16 29 18 3 19.2 20.21 25 8 29 11 / *Eccles stes* 5:2 3 7 9—(D) *Ecclesi astes* 5 1-2 7 10

APOCRYPH *Eccles sticus* 2 4 29 6 7-8 8 19 9 8 9.4 8-9 20 8 21:25 26 28 11 30.24—(D) OT *Ec lesiast cus* 2.2 4 34 6 7-8 8 22 9.25 19 4,8-9 2 8 21.28 29 28 13 30.26

NEW TESTAM ENT *Matthew* 3 19-23 / *Ma k* 4 3 0 / *Luke* 8 5 15 / *Acts* 19 36

4 HOM R *Iliad* BK I [1-492] 3a 8a BK IX [172] 57a 58d / *Odyssey* BK X [46 -54] 234a d BK XII [60-419] 252d 254c

5 AES HYLUS *Persia s* 15a 26d esp [739-786] 23a-c / *Seven Aga nst Thebes* 27 39a c esp [631-719] 34a 35 / *Prometheus B und* 40a 51d esp [259-398] 42d-44a [930-1 93] 50a 51d

5 SO HO L *O d pus the K ng* 99a 113 / *A tigone* 131a 142d esp [633 767] 136c 137d / *Aj x* 143 155a c esp [654-683] 148d 149a [748-783] 149c d / *Electra* 156a 169a c esp [21 403] 157b 159b [938 57] 163c 164d / *Ph loctet s* 182 195 c

5 EURI I E *Rh us* 203a 211d esp [1 148] 203a 204c / *Suppl a ts* [465-510] 262b d / *Bacch ntes* 340 352 c esp [215 433] 341d 343b / *Pl en cian Ma dens* [443-593] 381d 383

6 HE ODOTUS *Hi to y* K III 94c d 97b c K VI 216d 218b 225c d

6 THUCYDID S *P l p n s a Wa* K I 370a c BK II 393a 402 404d esp 402 d 403b c K IV 449b-c 462d 463a BK V 507 BK V 545b-c

7 PLATO *Prot g as* 62b-64a

9 ARISTOTLE *Ethics* BK CH 2 [1 4 10-26] 349c d K VI CH 5 [1140 3 9] 389b CH 9 [1 42b17 34] 391d 392b BK V CH 6 399d 400c C 9 [1151 8-b 6] 402b c / *Rh t ric* BK I CH 12 [1389a2]-C 4 [39 b11] 636b 638a

13 VIRGIL *Aene d* K VII [572-6 0] 252a b K XI [3 6-444] 338b-340a

14 PLUT RCH *T b Peri les* 154d / *P l pidas* 232a 233a 244c 245a / *M c ll P lopidas* 262c / *Nicias* 423a-438d / *Alexa der* 547b-548a / *Ca s and Tiberius Gracchus Agis and Cleomenes* 690c-691a c

15 T CITUS *A nals* BK III 61b / *Histories* BK I 205d 206a BK III 252c

20 AQUINAS *Summa Theologica* PART I II Q 108 A 3 REP 5 334a 336b

21 D NTE *Divine Comedy* HELL, XXVI [49 142] 38c 39c

22 CH UCER *Tro l s and Cressida* BK III STANZA 42 47 60a b STANZA 129 71a b / *N n s Priet s Tale* 450a-460b esp [15 273 452] 457b-460b / *Marciple s Tale* [17 206-311] 491b-493b

23 MACHIAVELLI *Prince* CH XXV 36b

23 HO ES *Le atha* PART I 77d 79c d

25 MONTAIGNE *Essays* 22d 23b 53c 55d 174a d

26 SHAKESPE RE *Romeo and J l et* ACT III SC III 304d 306d / *Ist Henry IV* ACT I SC III 437d-440d ACT II SC III 443b 444b ACT III SC I [147 190] 451c-452a ACT IV SC III [1 29] 459b c

27 SH KESPE RE *Hamlet* 29a 72a c esp ACT IV S IV [33-66] 59a c / *Troilus and C essida* ACT III SC III [184 241] 124b 125a / *Oth llo* 205a 243a c esp ACT V SC II [338 356] 242d 243a / *King Lear* 244a 283a c / *Coriolanus* 351a 392 c esp ACT III SC II III 373c 377a / *Timon of Athens* 393a 420d esp ACT II SC II 400 403b / *Henry VIII* ACT I SC I [122 149] 551b c SC II [68 88] 553c d

29 CERVANTES *Don Q ixote* PART I 8c 10a 116a 117b PART II 252c 257a 291d

30 BA ON *Novum Orga um* BK I APH 92 125b d

33 PASCAL *Pen ées* 172 203b

36 STERNE *T stram Shandy* 203a 207b

44 BOSWELL *J h on* 149b c

48 MELVILLE *Moby Dick* esp 148b 150a

51 TOLSTOY *War and P ace* BK I 15d 18b BK III 139a c BK V 211a 213a K VIII 321d 322d 328c 333a 334d 335a 336b 337d BK IX 344b 346a 366d 367b BK X 426b BK XI I 569d 570b BK XIV 596c d 603a 604b OGUE 655c 656b

52 DO OEVSKY *B others Karama ov* BK X 273 d

53 J s *P y h logy* 799b 807a passim esp 800 801a 806b 807a

4 The sphere of p udence

4a The confinem nt of prudence to the things with n our pow r the rel tion of pru dence to free w ll choice and deliber at on

9 ARISTOTLE *Ethics* BK III CH 2 3 357b 359a BK VI - [1139a32 b11] 388a b CH 5 [114 a 31 b5] 389a b CH 7 [1141b8 14] 90c

12 EPICTETUS *Discou ses* BK I CH 1 105a 106c CH 8 124a 125a CH 29 134d 138a BK II CH

(4 *The sphere of prudence* 4a *The confinement of prudence to the things within our power the relation of prudence to free will choice and deliberation*)

5 142c 144a CH 10 148c 150a CH 23 170a 172d BK III CH 2 177c 178d CH 10 185d 187a CH 18 192a c BK IV CH 1 213a 223d
12 AURELIUS *Meditations* BK II SECT 6 257c SECT 9 257d SECT 11 258a b SECT 16 259a BK V SECT 19 272a SECT 34 273c BK VI SECT 16 275b d SECT 22 276a BK VII SECT 16 280d BK VIII SECT 16–17 286d SECT 28 287c SECT 48 289 BK IX SECT 7 292b BK X SECT 34 35 301a b BK XII SECT 3 307b d
19 AQUINAS *Summa Theologica* PART I II Q 13 AA 4–6 675a 677b Q 14 AA 3–6 678c-681a
20 AQUINAS *Summa Theologica* PART I II Q 57 AA 4–6 38a 41a
23 MACHIAVELLI *Prince* CH XXV 35a b
23 HOBBES *Leviathan* PART I 53c d
25 MONTAIGNE *Essays* 52c 53c 100a 101c 136b 139b 393b 394 451d 452d 514d 515a
30 BACON *Advancement of Learning* 76d 78a
31 DESCARTES *Discourse* PART III 48b 51b
35 LOCKE *Human Understanding* BK II CH XXI SECT 48–54 190c 192c passim SECT 57 193b-c
42 KANT *Fund Prin Metaphysic of Morals* 266c 267d / *Practical Reason* 318c 321b esp 320c 321b 357c 360d
53 JAMES *Psychology* 199b 201b

4b The restriction of prudence to the consideration of means rather than ends

9 ARISTOTLE *Ethics* BK V CH 9 [1137 5 26] 385b c BK VI CH 5 389a c CH 9 [1142^b17 34] 391d 392b CH 12 [1144 6–37] 393d 394a CH 13 [1144^b30–1145 6] 394c d / *Rhetoric* BK I CH 9 [1366^b20–22] 609a
19 AQUINAS *Summa Theologica* PART I II Q 14 A 2 678b-c Q 15 A 3 682c-683b
20 AQUINAS *Summa Theologica* PART I II Q 57 A 5 ANS 39a 40a Q 58 A 4 ANS 44a d A 5 REP 1 44d-45c
42 KANT *Fund Prin Metaphysic of Morals* 266b 267d
53 JAMES *Psychology* 796a b

5 The nature of a prudent judgment

5a The conditions of prudent choice counsel deliberation judgment

OLD TESTAMENT *Proverbs* 11 14 12 5 13 10 16 14 18 15 22 19 2 20 5 18 24 6
APOCRYPHA *Tobit* 4 8—(D) OT *Tobias* 4 19 / *Ecclesiasticus* passim esp 6 6 8 17 25 4–5 32 18 34 9 11 37 7 6—(D) OT *Ecclesiasticus* passim esp 6 6 8 20 5 6–7 32 22 23 34 9 12 37 7 0
5 AESCHYLUS *Suppliant Maidens* [333–523] 5a 7 / *Persians* [739–786] 23a-c
5 SOPHOCLES *Antigone* [633–767] 136c 137d
5 EURIPIDES *Rhesus* [1 148] 203a 204c / *Suppliants* [465–510] 262b d / *Phoenician Maidens* [443–593] 381d 383a [697–747] 384a d / *Iphigenia at Aulis* [378 414] 428b-c
5 ARISTOPHANES *Birds* [366 382] 546d 547a
6 HERODOTUS *History* BK I 31c d 46c d BK VII 217a 218c 219a-c 258d BK VIII 269c 270a
6 THUCYDIDES *Peloponnesian War* BK I 383d 384a BK II 397b c BK III 427a c
7 PLATO *Meno* 183d 184c 188b-189a / *Republic* BK III 337b 338a BK X 439b-441a c
9 ARISTOTLE *Ethics* BK I CH 3 [1094^b19–1095 12] 340a b CH 4 [1095 30–^{b}12] 340c d BK III CH 2 3 357b 359a BK V CH 9 [1137 5 26] 385b c BK VI CH 5 389a c CH 7 [1141^b23] 390c d CH 8 [1142 13 2] 391b CH 9–11 391c 393b
12 EPICTETUS *Discourses* BK III CH 6 181d 18 b
12 AURELIUS *Meditations* BK IV SECT 12 20 c
14 PLUTARCH *Timoleon* 197c 198a
15 TACITUS *Histories* BK II 234b
19 AQUINAS *Summa Theologica* PART I Q 22 A 1 127d 128d Q 83 A 1 ANS 436d-438a A 3 ANS and REP 2 3 438d 439c PART I II Q 13 A 1 672d 673c A 3 ANS 674c-675a Q 14 677b-681a Q 44 A 2 808b-d A 4 ANS 809c 810a
20 AQUINAS *Summa Theologica* PART I II Q 57 A 4 REP 3 38a 39a A 5 ANS and REP 2 39a 40a A 6 40a-41a
22 CHAUCER *Troilus and Cressida* BK I STANZAS 90–93 12b 13a / *Tale of Melibeus* 401a 432a esp par 7 13 402b-405a par 17 31 407b-414a par 59–78 427a-432a
23 HOBBES *Leviathan* PART I 53a 53c-d 60c d 64a c 65a c 66c 68a 77d
25 MONTAIGNE *Essays* 393b 394a 450d-451a 520b 522d
26 SHAKESPEARE *Comedy of Errors* ACT III SC I [85 106] 157b
27 SHAKESPEARE *Troilus and Cressida* ACT II SC II 113c 115d
29 CERVANTES *Don Quixote* PART II 235d 237a
30 BACON *Advancement of Learning* 86c 95b
33 PASCAL *Provincial Letters* 39a / *Pensées* 381 383 238b
35 LOCKE *Human Understanding* BK II CH XXI SECT 48 190c d SECT 53 191d 192b SECT 57 193b c
35 HUME *Human Understanding* SECT V DIV 36 465a d [fn 1]
42 KANT *Fund Prin Metaphysic of Morals* 266b c / *Practical Reason* 318c 321b 357c 360d
43 FEDERALIST NUMBER 2 32b d NUMBER 8 46d-47a
43 MILL *Liberty* 276b 277a 287b-c 295a / *Representative Government* 410c d / *Utilitarianism* 456a-457b
44 BOSWELL *Johnson* 149b-c

46 H GE *Philosophy of Right* PART III par 27 74b d
51 To TOY *War and P ac* BK V 211a 213a BK VI 235a
53 JAMES *Psychology* 13a 15a 794a 798b esp 796 b 797b-798a
54 FR UD *General Introduction* 624d 625b

5b The acts of the practical reason n m tters open to choice dec s on nd command le ding to execution or use

8 ARISTOTLE *Soul* K CH 10 [433 3 31] 665d 666a
9 ARI TOTL *Ethics* K I CH 2 [03b 7 1104 9] 349b c BK III CH 2 3 357b 359a BK VI CH 387d 388b CH 7 [1141b8 23] 390c d H 10 [143 4 10] 392b c CH 12 13 393b 394d BK VII CH 2 395 396c esp [1145b 20-1 46 8] 395c 396 CH 10 [1152 8 24] 403a b
19 AQUINAS *Summa Theologica* PART I Q 22 A 1 ANS and REP 1 2 127d 128d PART I Q 17 686b d 693d
20 AQU AS *Summa Theologica* P RT I II Q 57 A 6 ANS and REP 40a-41a Q 61 A 3 AN 56b 57a
27 SHAKE EARE *Hamlet* ACT IV SC V [33 66] 59a c
38 ROUSSEAU *Soci l Contra t* K III 409d
42 KANT *Fu d Pri Metaphy ic of Morals* 260a c 265c 267d esp 266 267d / *Pract cal Re on* 305d 307d 314d 321b
46 H G L *Phil ophy f Right* RT I par 38 21d A T II pa 214 71a c
51 T LSTOY *W a d Pe ce* K VI 235a K X 411 -412d 421c-426a 440 -442c 459d 461d BK X 488 -489 K XII 536b BK X I 584c 585 586d 587d EPILOGUE I 654a 655c P O UE II 685a
53 J MES *Psychol gy* 794a 798b esp 797b 798a

5c The maxims of prud nce

OLD T ST M NT *P overbs* passim / *Eccl s stes* passim
APOCR P A *E le iast cus* 43 passim—(*D*) OT *Eccl i sti u* 43 pass m
NEW TESTAMENT *Matth w* 6 19-34 / *Luke* 2 3 32 / *Acts* 9 36 / *I Corinth ans* 7:29-35 / *Eph sia s* 5 5-16 / *Ph lippi ns* 4 6 / *I Peter* 5 7
5 AE CHYLUS *S ven Aga t Theb s* [631-7 9] 34a 35a / *Prometheus Bou d* [59-398] 42d-44a [887-906] 49 d [930-1 93] 50a 51d
5 SO HOCLES *A tig e* [1-99] 131 132a / *Elect a* [12 403] 157b-159b [938 57] 163 164d
6 H RODOTU *H st ry* K II 225b 26a BK VIII 269 270a
6 THU YDIDES *Pelopo nes an W r* K 370 c BK V 507
14 PLUT RCH *Pericles* 131b-c

22 C AUCER *Troilus and C ssida* BK I STANZA 101 118 14a 16b STANZA 136-139 18b 19a BK III STANZA 33 236 85a b
23 HOBBES *Levi than* PART I 53a
25 MONTAIGNE *Es ys* 51a 55d esp 52c 53c 136b 139b 174 d
26 SHAK S ARE *Henry V* ACT I SC II [183 220] 535d 536b
27 S IAKE EARE *Hamlet* ACT I SC III [59-80] 35a
29 C R NTES *Don Quixot* PART II 331d 333b
30 BACON *Adva c ment of Learn ng* 81d 95b
31 D SCARTES *Discourse* ART III 48b 51b
31 SPINOZ *Eth s* PART IV PROP 45 SCHOL 438b
35 HUME *Human Under tand ng* SECT V D V 36 465d [fn 1]
43 MILL *Repre entat ve Go ernment* 345b 410c d

6 Prudence n relation to the common good of the commun ty

6a Political p udence the prudence of the pr nce or statesman of the subject or citizen

O D TESTAM NT *Genes s* 41 33-41 / *I K gs* 3 6 8—(*D*) *III K gs* 3 16-28 / *Proverbs* 1 14 20 18 28 3 1-3 24 6 25 6-7 9 12 3 4-5 / *Ec les astes* 8 2 4
A OCRYPH *T bit* 12 7—(*D*) OT *Tob a* 2 7 / *Ecclesiasticus* 10 3—(*D*) OT *Eccles ti us* 10 1 3
4 HO ER *Il ad* BK I [1 492] 3a 8a BK IX [-172] 57a 58d
5 AE CHYLUS *S ppliant Maidens* [333-523] 5a 7 / *Per ans* 15a 26d esp [733-786] 23a
5 SO HOCLES *Oed pu the K g* [1-5] 99a 103d / *Ant gone* [-99] 131 132a [633 767] 136 137d / *Philoct tes* 182a 195a c esp [50-134] 182d 183c
5 EUR DES *Rhes us* 203a 211d esp [48] 203a 204c / *Suppliants* [3-597] 259a 263c / *Bacchantes* [266-27] 342a b / *Phoen c an M dens* [443-593] 381d 383 [697 747] 384a d / *O tes* [682 716] 400d 401 / *Iph gen a at Auli* 425a-439d esp [-54] 425a-429d
5 ARIS O AN S *A h l s* [480-57] 460d 461c [97 -999] 466c d / *Kn ght* 470a 487a c sp [316-1408] 486 487a c / *F gs* [686-737] 572 d [417 514] 581 582 / *Lys st ata* [4 -6] 590a 591
6 H ODOTUS *H st ry* BK 6a b 41c d BK III 97b BK V 216d 218 225a 226b 242a b 245d 246b
6 THU YDID *Pelop an W r* K 365c 367a 370 383d 384 BK 389d 391b 393a c 397b c K 427a-c 436d 438b BK V 451a 462d-463a 474 -c BK V 483 -485b 507a K VI 511 516 K VI 545b c BK V I 564a-c 569 570 574d-575d

(6 Prudence in relation to the common good of the community 6a Political prudence the prudence of the prince or statesman of the subject or citizen)

7 PLATO *Protagoras* 43a b / *Meno* 174d 176a / *Statesman* 604c 608d / *Laws* BK III 669b 670c BK IX 754a b BK XII 785d 786b / *Seventh Letter* 806d 807b 813d 814d

9 ARISTOTLE *Ethics* BK VI CH 5 [1140b4 11] 389b CH 8 [1141b23 1142 12] 390d 391a BK X CH 9 434a 436a c / *Politics* BK III CH 4 473c 475a CH 11 479b-480c BK IV CH 14 498b-499c BK V CH 8 11 509d 518c BK VII CH 2 3 528a 530a

12 EPICTETUS *Discourses* BK III CH 7 182b 184a

12 AURELIUS *Meditations* BK III SECT 5 261a BK IV SECT 4 264a BK V SECT 16 271c d BK VII SECT 5 280a b BK IX SECT 23 293c BK X SECT 6 297a b BK XI SECT 8 303a b

13 VIRGIL *Aeneid* BK XI [296-444] 336a 340a

14 PLUTARCH *Pericles* 129a 141a c / *Alcibiades* 167 168a / *Alexander* 540b d 576d passim / *Phocion* 604b d 605d / *Caius and Tiberius Gracchus Agis and Cleomenes* 689b d 691 c / *Demetrius* 736 737b / *Dion* 781b d / *Brutus* *Dion* 824b d 826a c

15 TACITUS *Annals* BK IV 72b 73a BK XVI 176b d / *Histories* BK I 193d 211c 212b BK III 247a

19 AQUINAS *Summa Theologica* PART I Q 22 A 1 ANS 127d 128d

21 DANTE *Divine Comedy* HELL XXVII [55 136] 40a 41b PARADISE XII [88 111] 126b c

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25 MONTAIGNE *Essays* 51a 55d 381a 388c 451d-452d 488b 489b 490d 491d

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27 SHAKESPEARE *Antony and Cleopatra* ACT II SC I [1 27] 318c d / *Coriolanus* 351a 392 c esp ACT II SC III [53 160] 366c 367c ACT III SC I [28-92] 373d 374c

29 CERVANTES *Don Quixote* PART II 331a 333b 340d 343a 353b-356d 361a d

30 BACON *Advancement of Learning* 4c 6c 20d 26a 74b-c 81d 82a 94b 95b

35 LOCKE *Civil Government* CH XIII SECT 56-158 61a 62b

36 SWIFT *Gulliver* PART I 7b 8a 28b 29b PART III 112 115b

38 MONTESQUIEU *Spirit of Laws* BK VI 39b

38 ROUSSEAU *Political Economy* 368b-c 373 374a / *Social Contract* BK III 409d

39 SMITH *Wealth of Nations* BK I 109d 110d BK II 126a

40 GIBBON *Decline and Fall* 1b 2a passim 50a 331b 332d 609d 610a 645a

41 GIBBON *Decline and Fall* 168c

43 FEDERALIST NUMBER 5 37d NUMBER 96b NUMBER 31 105b c NUMBER 40 130c 132a NUMBER 62 190d 191a NUMBER 222b d

43 MILL *Representative Government* 334b-c

44 BOSWELL *Johnson* 255a 256a

46 HEGEL *Philosophy of Right* PART III par 2 92a ADDITIONS 166 145b-c / *Philosophy of History* PART II 271d 272a PART I 361d 362a

49 DARWIN *Descent of Man* 315b-c

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6b Jurisprudence prudence in the determination of laws and the adjudication of cases

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6 HERODOTUS *History* BK I 32b c BK 95d 96b

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CROSS REFERENCES

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ADDITIONAL READINGS

Li ted below e works not i clud d in *Great B k of th Western World* but relev nt to the idea and topics w th which this chapter deals These w ks ar divided to two g oups

I Works by autho s epresented in th s collect n
II Works by autho s ot rep esented in this coll t on

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Chapter 74 PUNISHMENT

INTRODUCTION

THE problem of punishment divides into a number of questions In what does punishment consist? What purpose should punishment serve or what should be its principle or reason? Who has the authority to punish and under what conditions shall this authority be exercised? Who shall be punished and who shall be exempt from punishment? What are the forms or kinds of punishment? Are any of these reprehensible either in principle or for their consequences? Should there be a proportion between the severity of punishment and the gravity of the offense? Can a person punish himself? Do men desire to be punished?

These questions apply though not with equal emphasis to the three major types of wrongdoing in relation to which men discuss the nature and the need of punishment its justice or its expediency Punishment is traditionally considered in relation to vice to crime and to sin According to the type of wrongdoing being considered the punitive agent may be the wrongful individual himself or his family his state his church or God

The lines which separate these areas of the problem of punishment cannot be sharply drawn in all cases for as certain acts simultaneously violate the moral the civil and the divine law they may also cause a person to be simultaneously subject to punishment from diverse sources The wrong or injury which punishment is supposed to redress may in some cases fall under none of these headings as for example acts of war or rebellion It is sometimes questioned whether the theory of punishment remains the same when punitive steps are taken by one state against some or all the people of another or again when a government applies penalties for a rebellion engaged in by members of its own community

In this chapter we shall deal with the problem of punishment in its most general terms, for the most part considering the foregoing questions without regard to the distinction of sin crime and vice or to the differences between divine and human punishment or between punishment by the state and in the family (*i e* punishment as involved in the enforcement of law and punishment as an instrument of education or training) These more specialized topics belong to other chapters *e g* punishment as affecting the formation of character to the chapters on EDUCATION and VIRTUE AND VICE punishment as administered by parents to the chapter on FAMILY divine rewards and punishments to the chapters on IMMORTALITY and SIN

The basic ideas in terms of which any discussion of punishment proceeds are of course the subjects of the chapters on JUSTICE and LAW One other chapter—PLEASURE AND PAIN—is of peculiar relevance to the question about the nature of punishment Concerning the nature of punishment there seems to be no great difference of opinion in the tradition of western thought Punishment is generally conceived as the infliction of pain though some writers distinguish between corporeal and spiritual punishment according as the pain inflicted is the pain of sense or the pain of deprivation and loss Imprisonment for example always entails the pain of loss—the loss of freedom—but it may also carry with it the suffering of physical hardships or even tortures The torment of the damned is according to some theologians, both corporeal and spiritual—the agony of hell fire and the anguish of the soul deprived of God's love and presence

IF THERE IS LITTLE DISPUTE about the nature of punishment the opposite situation prevails concerning its purpose Why men should be

punished is one of the most controversial questions in the field of moral and political thought and in psychology and theology as well

The major opposition in the tradition of the great books is between those who think that punishment need only be inherently just and those who think it cannot be justified without reference to its utility or expediency While this debate goes on for more than twenty centuries punishments in actual practice—whether in accordance with the law or uncontrolled by it—tend generally to be severe and often fiendish or ferocious Not until Beccaria in the 18th and Bentham in the 19th century does the discussion of punishment lead to major reforms in the spirit and provisions of the penal codes But the opposite positions in the debate across the centuries are never without practical significance for penal institutions and punitive measures even when theory is not immediately reflected in practice The speculative significance of the issue is however always immediately apparent Although justice and law are more fundamental and comprehensive ideas than punishment this one problem of punishment—the question of its purpose—critically tests the meaning of anyone s theory of law and justice

It may be that the issue cannot be fairly stated in terms of *purpose* To use that word may beg the question since one of the basic positions in the controversy appears to be that punishment has no purpose in the sense of *serving some end beyond itself* or producing some desired consequence *in the future* This is the theory—shared by Kant and Hegel—that punishment should be purely retributive

According to this view the effect of the punishment upon the wrongdoer or upon others whose conduct may be affected by punishments meted out or threatened must not be taken into account at all Nothing should be sought except the preservation of the balance sheet of justice by seeing that every wrong is duly requited by a proportionate measure of punishment Nor is the requital purely retributive if it considers any person except the wrongdoer himself That punishment of the transgressor may assuage the feelings of those he has injured or even satisfy a desire for revenge should have no motivating force The only pleasure the spectacle of punishment should yield the only desire it should satisfy is that of seeing the moral law upheld We should punish only because we have under the moral law a duty to do so

Kant castigates as utilitarian every theory of punishment which directs it to the service of anything besides strict justice—such as the reformation of the criminal the deterrence of others the welfare of society or the slaking of the thirst for vengeance Juridical punishment he says can never be administered merely as a means for promoting another good either with regard to the Criminal himself or to Civil Society but must in all cases be imposed only because the individual on whom it is inflicted *has committed a Crime* The Penal Law is a Categorical Imperative and woe to him who creeps through the serpent windings of Utilitarianism to discover some advantage that may discharge him from the Justice of Punishment or even from the due measure of it

What shall determine the mode and measure of punishment? Kant answers It is just the Principle of Equality by which the pointer of the Scale of Justice is made to incline no more to one side than the other It may be rendered by saying that the undeserved evil which anyone commits on another is to be regarded as perpetrated on himself This is the Right of Retaliation (*jus talionis*) and properly understood it is the only Principle which can definitely assign both the quality and the quantity of a just penalty All other standards are wavering and uncertain and on account of other considerations involved in them they contain no principle conformable to the sentence of pure and strict Justice

RETRIBUTIVE PUNISHMENT or retaliation seems to express the principle of justice or fairness in exchange The Mosaic injunction that thou shalt give life for life eye for eye tooth for tooth burning for burning wound for wound stripe for stripe occurs in the context of other passages which declare the compensation in goods which an injured party shall receive for the loss of or damage to his chattel But it is also accompanied by ordinances which impose the death penalty for wrongs other than the taking of a life

You have heard Christ declares in the Sermon on the Mount that it hath been said An eye for an eye and a tooth for a tooth But I say unto you That ye shall resist not evil but whosoever shall smite thee on thy right cheek turn to him the other also And if any man will sue thee at the law and take away thy coat let him have thy cloak also This passage has sometimes been taken to mean that all punishment is simply vengeance and that instead of returning injury for injury the Christian should love his enemies and forgive them If you think someone has wronged you Princess Mary says to Prince Andrew in *War and Peace* forget it and forgive! We have no right to punish

But the Christian view of punishment may not be the same when the punishment of the evildoer is a question for the state rather than for the individual Avenge not yourselves St Paul commands for it is written Vengeance is mine I will repay saith the Lord The individual need not avenge himself for God punishes the wicked not only God but the ruler of the earthly state who St Paul says is the minister of God to thee for good But if thou do that which is evil be afraid for he beareth not the sword in vain for he is the minister of God a revenger to execute wrath upon him that doeth evil

A life for a life appears to be the symbolic statement of the *lex talionis* in the Greek as well as the Hebrew tradition Justice claims aloud her debt the Chorus explains in the *Choephoroe* of Aeschylus. Who in blood hath dipped the steel, deep in blood her meed shall feel Whosoever shall take the sword shall perish by the sword But as Aristotle points out—and similarly Aquinas in his comment on the *lex talionis* of the Old Testament—simple reciprocity does not determine the mode of retribution People *want* even the justice of Rhadamanthus to mean this Should a man suffer what he did right justice would be done Yet Aristotle points out in many cases reciprocity and rectificatory justice are not in accord *e g* if an official has inflicted a wound he should not be wounded in return and if someone has wounded an official he ought not to be wounded only but punished in addition Retaliation consists in reciprocity only if it is in accordance with a proportion and not on the basis of a precisely equal return

Punishment as retaliation may seem to be inseparable from revenge Yet according to Lucretius the surrender of primitive freedom for the restrictions of civilized life is motivated by the desire to substitute equitable retribution for unlimited vengeance Mankind tired out with a life of brute force lay exhausted from its feuds and therefore the more readily it submitted of its own free will to laws and stringent codes As each man moved by anger took measures to avenge himself with more severity than is now permitted by equitable laws for this reason men grew sick of the life of brute force

Hegel tries to clarify what he regards as a popular confusion of retribution with revenge. In that condition of society he writes, when there are neither magistrates nor laws, punishment always takes the form of revenge revenge remains defective inasmuch as it is the act of a subjective will It is understandable that retribution should be objected to on the ground that it looks like something immoral *i e* like revenge and that thus it may pass for something personal Yet it is not something personal but the concept itself which carries out retribution Vengeance is mine saith the Lord as the Bible says The Eumenides sleep but crime awakens them and hence it is the very act of crime itself which vindicates itself.

The apparent contradiction in the identity and difference of retribution and revenge can, in Hegel s opinion be resolved On the one hand it can be said that the annulment of crime is retribution insofar as retribution in *conception* is an injury of the injury On the other hand it can be said that the annulling of crime in this sphere where right is immediate is principally revenge which is just in its content insofar as it is retributive The demand that this contradiction be resolved is the demand for justice not as revenge but as punishment

Hegel s resolution seems to be in terms of a distinction between the particular and the universal When the right against crime has the form of revenge it is only right implicit not right in the form of right *i e* no *act* of revenge is justified Instead of the injured party the injured *universal* now comes on the scene and this

has its proper actuality in the court of law It takes over the pursuit and the avenging of crime and this pursuit consequently ceases to be the subjective and contingent retribution of revenge and is transformed into the genuine reconciliation of right with itself i.e into punishment

On this conception of punishment Hegel like Kant decries every utilitarian purpose for punishment Such misconceptions of punishment arise he says from the supposition that both crime and its annulment are unqualified evils which makes it seem quite unreasonable to will an evil merely because another evil is there already To give punishment this superficial character of an evil is amongst the various theories of punishment the fundamental presupposition of those which regard it as a preventive a deterrent a threat as reformative etc and what on these theories is supposed to result from punishment is characterized equally superficially as a good But the pre ise point at issue is wrong and the righting of it If you adopt that superficial attitude toward punishment you brush aside the objective treatment of the righting of wrong

THE ISSUE WOULD SEEM to be a conflict between justice and expediency with the utilitarians ident fying retribution with revenge and demanding that punishment serve some good or mitigate some evil But sometimes the question is whether justice and expediency are compatible

In the debate on the treatment of the Mytilenians which Thucyd des reports Cleon calls upon the Athenians to show no mercy to their rebellious subjects Their offence he says was not involuntary but of mal ce and deliberate and they deserve to be punished If you follow my advice you will do what is just towards the Mytilenians and at the same time expedient. For if they were right in rebelling you must be wrong in ruling However if right or wrong you determine to rule you must carry out your principle and punish the Mytilenians as your interest requires

D odotus objects to the pol cy of putting the Mytilenians to death on the ground that it is not a question of justice but of expediency We are not in a court of justice he says but in a political assembly and the question is not justice but how to make the Mytilenians useful to Athens I consider it far more useful for the preservation of our empire to put up with injustice than to put to death however justly those whom it is our interest to keep alive As for Cleon s idea that in punishment the claims of justice and expediency can both be satisfied facts do not confirm the possibility of such a combination

In the chapter on justice in *Utilitarianism* Mill seems to place justice above expediency but he also seems to reduce retribution to revenge and call it just The sentiment of justice which includes as one of its elements the desire to punish Mill identifies with the natural feeling of retaliation or vengeance Retribution or the giving of evil for evil he says becomes closely connected with the sentiment of justice and is universally included in the idea The principle of giving to each what they deserve he adds that is good for good as well as evil for evil is not only included within the idea of Justice as we have defined it but is a proper object of that intensity of sentiment which places the Just in human estimation above the simply Expedient

Other writers seem to think that the utility of punishment is not incompatible with its retributive justice The great theologians for example considering the difference between the eternal punishment of the damned in Hell and the cleansing punishment of the repentant in Purgatory do not find it impossible for divine justice to include both absolute retribution and punishment which may be remedial as well as retributive Purely retributive punishment seems justifiable to them but they do not think that punishment can ever be justified simply by its utility—by the good it achieves—without any reference to the retaliation of evil for evil.

In the context of saying that the institution of slavery among men is a just punishment for Adam s sin and that God knows how to award fit punishments for every variety of offence Augustine observes that we must not only do harm to no ma but also restra n him from s n or punish his sin so th t either the man himself who is punished may profit by h s experience or others be arned of his example. Here there

seems to be no thought that retribution excludes a reformative or deterrent use of punishment Aquinas even more explicitly combines the remedial and the deterrent utility of punishment with the function of punishment to preserve the order of justice by meting out an equitable retribution

In willing justice God wills punishment according to Aquinas The order of justice belongs to the order of the universe and this requires that penalty should be dealt out to sinners But just retribution is not the only reason for punishment Sometimes it is for the good of those who are punished sometimes for the amendment of others These reasons for punishment apply to human as well as to divine law When a thief is hanged this is not for his own amendment but for the sake of others who at least may be deterred from crime through fear of punishment Punishment is a proper effect of human law not merely because justice requires it but because the law makes use of the fear of punishment in order to ensure obedience

In discussing the proportion between the severity of the penalty and the gravity of the fault in the punishment of sin under the Mosaic law Aquinas explains that in addition to the reason of justice (that a greater sin other things being equal deserves a greater punishment) there is the purpose of reformation (since men are not easily cured of habitual sin except by severe punishments) and the purpose of prevention (for men are not easily deterred from such sins unless they be severely *punished*) Here three reasons for punishment are stated side by side But in the opinion of Aquinas retribution is more than the primary it is the one indispensable reason for punishment cannot be justified except as doing the work of justice

THE VIEW OF KANT AND Hegel that retribution or retaliation is *the only basis* for punishment—not merely the primary or the indispensable *reason*—meets its exact opposite in what appears to be the completely utilitarian theory of punishment to be found in the writings of Plato Hobbes Locke and *Rousseau*

In the *Protagoras* arguing for the proposition that virtue can be taught Protagoras insists that no one punishes the evil doer for the reason that he has done wrong—only the unreasonable fury of a beast acts in that manner But he who desires to inflict rational punishment does not retaliate for a past wrong which cannot be undone. He has regard to the future and is desirous that the man who is punished and he who sees him punished may be deterred from doing wrong again He punishes for the sake of prevention thus clearly implying that virtue is capable of being taught

Plato himself seems to adopt the opinion of Protagoras In the *Laws*—wherein he sets forth the provisions of a penal code in a detail equalled in the tradition of the great books, only by the proposals of Hobbes—Plato says no man is to be punished because he did wrong for that which is done can never be undone but in order that in the future times he and those who see him corrected may utterly hate injustice or at any rate abate much of their evil doing Yet he also goes on to say that the law should aim at the right measure of punishment and in all cases at the deserved punishment This qualification seems in turn to be balanced by his remarks on the death penalty which he thinks should be imposed only on the incurable who cannot profit from punishment and whose execution would be an example to other men not to offend

The notion of desert in Plato s theory of punishment appeals to justice without implying any separation between retribution and reform In the *Gorgias* Socrates says that to suffer punishment is another name for being justly corrected when you do wrong A wrongdoer who escapes punishment suffers a greater evil than one who is punished for he who is punished and suffers retribution suffers justly Thereby justice is restored to his soul. The judge who prescribes just punishments cures the soul as the physician who prescribes the right remedies cures the body The criminal who having been unjust goes unpunished has no deliverance from injustice

The fact that just punishments are deserved does not seem to be the reason why men should be punished Considering the penalties imposed by gods and men in the next world *or in this*, Socrates summarizes his argument by saying that the proper office of punishment is two-

fold he who is rightly punished ought either to become better and profit by it or he ought to be made an example to his fellows that they may see what he suffers and fear and become better Those who are improved when they are punished by gods and men are those whose sins are curable and they are improved as in this world so also in another by pain and suffering

Like Plato Hobbes places the reason for pun ishment in the future rather than in the past—in its utility to procure certain effects rather than in its effecting retaliation He states it as a law of nature that in revenges (that is retribu tion of evil for evil) *men look not at the greatness of the evil past but the greatness of the good to fol low* Whereby we are forbidden to inflict pun ishment with any other design than for the cor rection of the offender or the direction of others Anything else he calls an act of hos tility

The chief aim of punishment in securing the reformation and the deterrence of criminals Hobbes thinks is to maintain public peace A punishment is an evil inflicted by publ c au thority on those who have transgressed the law to the end that the will of men may there by the better be disposed to obedience A law without a penalty attached is not a law but vain words It fails to achieve the end of law which is the same as the end of punish ment. The worst offenses—those to be pre vented by the most severe penalties—are crimes not against individuals but those that are of most danger to the public

Locke also derives from natural law the right to punish those who transgress that law for restraint and preventing the like offence to which he adds that each transgression may be punished to that degree and with so much severity as to make it an ill bargain to the of fender give him cause to repent and terrify others from doing the like This theory of punishment applies not only to man living in a state of nature but in civil society as well

Though Rousseau describes the wise states man as one who knows how by punishing crimes to prevent them he lays greater em phasis on the other motive for punishment—the reformation of the criminal There is not a single ill doer who could not be turned to some good The State has no right to put to death even for the sake of making an example anyone whom it can leave alive without danger Or as Fetyukovitch says in his address to the jury in the *Brothers Karama ov* The Russian court does not exist for punishment only but also for the salvation of the criminal Let other nations think of retribution and the letter of the law we will cling to the spirit and the meaning—the salvation and the reformation of the lost

THIS GREAT ISSUE CONCERNING the reason for or purpose of punishment seems to affect most of the other questions which men raise about the penalties to be imposed for wrongdoing—whether the wrong is a sin a crime or a vicious act and whether it is God or the state nature or the individual himself who inflicts the pain The reverse also seems to be true These other questions raise difficulties or issues which test the conflicting theories that punishment should be a just retaliation *exclusively* or should be justified *only* by its consequences or should somehow be a *combination* of awarding just de serts and securing good effects

For example the question of how the various modes and measures of punishment should be determined and assigned to diverse acts of wrongdoing does not seem to be answerable in the same way when the principle is simply retri bution and when the purpose of punishment is reformation and deterrence On the principle of retribution the gravity of the offence ap pears to be the only determinant of the severity of the punishment The punishment should fit the crime not the nature of the criminal as someone capable of being benefitted by punish ment

Kant and Hegel do not think that the justi fication of the death penalty for example de pends on the curability or incurab lity of the offender Nor do they think that the taking of the criminal s life should be motivated as Aquinas and Locke seem to suggest by the desire to protect society from his future dep redations It is sufficient that he has taken a life or committed some equally serious injury which ought to be repaid by a proportionate requital

What is nvolved in the act on of the crim inal, Hegel writes is not only the concept of crime the rational aspect in crime as such

whether the individual wills it or not the aspect which the state has to vindicate but also the abstract rationality of the individual s *volition* Since that is so Hegel argues punishment is regarded as containing the criminal s right and hence by being punished he is as honored as a rational being He does not receive this due of honor unless the concept and measure of his punishment are derived from his own act Still less does he receive it if he is treated either as a harmful animal who has to be made harmless or with a view to deterring or reforming him

On these grounds Hegel criticizes Beccaria s unqualified opposition to the death penalty In addition he rejects Beccaria s theory that it could not be presumed that the readiness of individuals to allow themselves to be executed was included in the social contract Rousseau takes the diametrically opposite view He argues for the death penalty on the ground that we consent to die if we ourselves turn assassins in order to protect ourselves from falling victims to assassins In making this con ent a part of the social contract Rousseau holds that we think only of securing [our own lives] and it is not to be assumed that any of the parties then expects to get hanged

Hegel disagrees with both Beccaria and Rousseau According to him, the state is not based upon a social contract nor does he admit that its fundamental essence [involves] the unconditional protection and guarantee of the life and property of members of the public as individuals On the contrary he holds it is that higher entity —the state— which even lays claim to this very life and property and demands its sacrifice

The state therefore according to Hegel cannot be denied the right of inflicting capital punishment Hegel admits that Beccaria s requirement that men should give their consent to being punished is right enough but he adds that the criminal gives his consent already by his very act The nature of the crime no less than the private will of the individual requires that the injury initiated by the criminal should be annulled However that may be he continues Beccaria s endeavor to have capital punishment abolished has had beneficial effects. Because of the efforts made by Joseph II and Napoleon to abolish it we have begun to see Hegel thinks which crimes deserve the death penalty and which do not Capital punishment has in consequence become rare, as in fact should be the case with this most extreme punishment

The attitude toward the death penalty as well as toward all other punishments is different when the *only* purpose of punishment is the welfare of society and the improvement of individuals whether they are actual or potential offenders The modes and degrees of punishment must then be determined by considering their effectiveness as means to the ends in view Montesquieu discusses the penal codes in various systems of law entirely in terms of their success in preventing crime Though he does not seem to think that punishment can improve the character of the individual he believes that a certain proportion between the penalty and the offense may tend to reduce the extent and gravity of crimes In Russia he says where the punishment of robbery and murder is the same they always murder

In general Montesquieu is opposed to unduly severe punishments and especially to cruel and unusual punishments not so much on the grounds of injustice as for the protection of liberty and public morals Hobbes Locke and Rousseau similarly discuss the severity of punishment with reference to its utility and like Montesquieu they face the problem that the same measure or degree of punishment may not be equally effective for the purposes of reformation and deterrence Severe penalties for example may have a greater deterrent effect upon potential offenders than milder forms of punishment but they may also tend to harden criminals instead of reforming them

The conflict of principles in the determination of punishments seems to be even more marked in the case of those who try to combine retribution with utility If for example the death penalty is the just desert for murder should it be applied on the grounds of retribution even though a particular murderer can be reformed by milder treatment? If heavy penalties were to prove highly effective as deterrents should they be applied to minor offenses which deserve less severe retaliations in order to reduce the amount of crime?

THERE SEEMS TO BE AGREEMENT for the most part on who shall have the authority to punish and who shall be subject to punishment in the relation of men to one another to the state and to God Punishment seems to be annexed to law as indispensable for its enforcement so that whoever has the authority to set rules of conduct for another also has the authority to impose penalties for their violation Yet the notion that punishment is a necessary sanction for law—which is apparently shared by those who take the retributive and those who take the utilitarian view of punishment—does not seem to fit both views equally well at least not to the extent that the end of law and its enforcement is the common good or the public welfare

Again it seems to be generally agreed that moral responsibility on the part of offenders is an indispensable condition of just punishment for their misdeeds Unless the sinful or the criminal act is voluntary unless it is intentional rather than accidental—or if negligent capable of being attributed to a willful error of judgment—the act is without fault and the agent without guilt But although those who make punishment retributive and those who make it reformative or deterrent seem to agree upon responsibility as prerequisite this principle does not seem to be equally consistent with both theories—at least not to the extent that the exemplary punishment may deter others quite apart from the responsibility of the person punished

The question of responsibility raises other difficulties *e g* the metaphysical issue about personal identity on which Locke takes the stand that unless the human individual is an enduring substance he cannot deserve subsequent punishment for his prior acts and the issue of free will and causality on which Hume s position seems to be that unless human actions are subject to causal necessity a man cannot be blamed for his acts or become the object of punishment or vengeance

Finally there is the problem of a natural need for punishment and of the penalties which nature itself imposes for wrongdoing to fulfill this need The familiar statement that virtue is its own reward and vice its own punishment is sometimes interpreted to mean that virtue and vice are intrinsically good and evil and sometimes to mean that through their natural consequences they heap benefit or injury on their possessor

Augustine for example says that by the sins which he committed God did justly punish him for every disorder in the soul is its own punishment and Kant distinguishes juridical from natural punishment in which Crime as Vice punishes itself and does not as such come within the cognizance of the Legislator The other interpretation seems to be represented by Hobbes theory that intemperance is naturally punished with diseases injustice with the violence of enemies cowardice with oppression In the chain of consequences started by any action he discerns the pains which are the natural punishments of those actions that are the beginning of more harm than good

But according to Freud it is the craving for punishment rather than the punishment which is natural *i e* psychologically determined Individuals punish themselves or seek to be punished for what is either real or fancied guilt The unconscious need for punishment plays a part in every neurotic disease Freud writes It behaves like a part of the conscience like the prolongation of conscience into the unconscious and it must have the same origin as conscience that is to say it will correspond to a piece of aggressiveness which has been internalized and taken over by the super ego If only the words were less incongruous we should be justified in calling it an unconscious sense of guilt

Whatever its psychological validity Freud s theory does not resolve the moral issue concerning the justice or utility of punishment Nor does it eliminate the possibility of other motives for submitting to punishment voluntarily Socrates in the *Crito* explains that he refuses to escape from the death penalty he thinks he does not deserve in order to uphold the law which is itself just even though in his own case it has been unjustly applied by men Thoreau and Gandhi refuse to obey laws their consciences cannot approve but do not resist the state s demand that they be punished for the law s infraction In an unjust society going to prison is for them the necessary fulfillment of the revolution begun by civil disobedience

OUTLINE OF TOPICS

REFERENCES

To find the passages c ted use the numbers in heavy type wh ch are the volume and page numbers of th pa sages referred to Fo example in 4 HOM R *Iliad* K II [265- 83] 12d the number 4 i the number of the volume in th set the number 12d indicates that the pas sa e is in section d of page 12

PAGE SECTIONS When the text is pr nted in one column the letters a and b refer to the upper and lower halves of the pa For example in 53 JA ES *Psychol gy* 116 119b the passage beg ns in the upper half of p ge 116 and end in the lower half of page 119 When the text is p inted n t vo col mns the letters a and b refer to the upper and lower halves of the left hand side of the page the lett rs c and d to th upper and low halves of the r ght hand s de of th page For example in 7 PLATO *Symp sii m* 163b 164c the passage begins in the lower half of the left hand side of pa e 163 and ends in the upper half of the r ght hand s de of pag 164

AUTHOR S DIVISIONS One more of the ma n divisions of a work (such as PART BK CH SECT) are sometimes included in the reference line numbers in br ckets are gi en in cer ta n cases *e g Iliad* BK II [265 83] 12d

BIBLE REFE ENCES The ref nces are to book chapter and verse When the Kin James and Dou y ve ons differ n t tle of book or in the numbe ing of chapters or er es the King James ersi n is cited first and the Do y ind cated by a (*D*) follows *e g* O D TEST M NT *Nehemiah* 7.45—(*D*) *II Esdr* 7 46

SYMBOLS The abbreviation esp calls the reader s attent on to one or mo e espe ially rel a t parts of whole ref en e pass m gnifies that the topic is d s us ed inte mit tently rather than continu ly in the wo k o passage c t d

F r addit onal i format on concern the style of the reference see the Explanat on of R fer nce Style for g neral guida ce in the use of *The Great Ide s* consult the P face

1 The gener l theory of punishment

1 The nature of puni hment the pain of ense and th pain of loss

4 HOMER *Odyssey* BK XI [568-60] 248d 249a

7 PLAT *Prota oras* 45b d

9 A I T TL *Ethic* BK VI CH 13 [1153b 4] 405

12 LUCRE IUS *N ture f Th gs* BK I I [978-023] 42d-43b

13 V RGIL *Aen d* BK VI [594-627] 227a b

18 AUGUSTIN *C ty of G d* BK XIX H 13 519a 520a

19 AQUINAS *Summa Theol g ca* P RT I Q 48 A 5 6 263a 264d Q 64 A 3 337a ART I I Q 39 A 4 CONTRARY 792a d Q 46 A 6 REP 2 816d 817d

20 AQUINAS *Summa Theol gica* P RT I I Q 87 A 2 ANS 186c 187b A 4 ANS 188b d A 6 189 190 P RT I I Q 19 A I 465b-d

21 D NT *D e C m dy* HELL, II [I 18] 4a b IV [13 45] 5 d v 7a 8b esp [I I 23] 8b PU GATORY VII [I 36] 62 d XX [I 75] 88b-89a

23 HO S *Lei atha* PART I 145 147b

25 MONTAI *Es y* 90d 91b

29 CERVANTE *D n Q te* PART II 333b

35 LOCKE *Ci il Gover nent* CH II SECT 7 13 26 28b esp SECT 8 26d 27a

42 KANT *P actical Rea on* 306b-c / *Intro Metaphysic f Morals* 393d / *Science of Right* 446b

46 HEG L *Philosophy of Right* PART I par 99-100 37b 38a ADDITIONS 56 125b c

1b The retr buti e purpose of punishment the *l x tal n* retali tion and revenge the r ghting of a wrong

OLD T TAM NT *Genesis* 4 15 4 9 6 34 / *Exodu* 2 2 34 esp 21.24 25 / *Lev i s* 19 18 24 16-21 / *Numbers* 35 10-34 / *D ter o my* 9 I 13 3 35 41-43 / *Judge* 15 -8 16 I 30 / *I S muel* 24 12—(*D*) *I K gs* 24 3 / *II S muel* 13.22 9 22 48 —(*D*) *II K g* 13.2 9 22 48 / *II K gs* 9 4 I —(*D*) *IV Kings* 9.4 o / *Psalms* 58 79 10- 2 94 I 149—(*D*) *Psalms* 57 78 10-12 93 I 149 / *Proverbs* 6 34 35 20-24 9 / *I a ah* 59 7 19—(*D*) *I a* 59 17 9 / *Jerem ah* 5 9 I I 46 I 50 5 8 5 —(*D*) *J rem a* 5 9 I II 46 I 5 5 8 51 I / *E ek l* 25 p 5—(*D*) *E e h l* 25 p 5 I 5 / *M h* 5 5—(*D*) *M cl as* 5 4 / *N hum* 2 3

APOCR L *J dth* 9 I 4 16 7—(*D*)

(1 *The general theory of punishment* 1b *The retributive purpose of punishment: the lex talionis; retaliation and revenge; the righting of a wrong*)

OT *Judith* 2 1-6 9 1-3 16:20-21 / *Rest of Esther* 16 18—(D) OT *Esther* 16 18 / *Wisdom of Solomon* 1 8 5 17 23 11 15 20—(D) OT *Book of Wisdom* 1 8 5 18-24 11 16-21 / *Ecclesiasticus* 5 1 7 7 17 12 6 18 23 24 23 14 27:28 28 -8 35 18-19 39:28 30 48 7-8—(D) OT *Ecclesiasticus* 5 1-9 7 19 12 7 18:23 24 25:20-21 27 31 28 1 11 35:22 25 39 33-36 48 7-8 / *I Maccabees* 2 67-68 9 33 42 3 1-6 5:2 4—(D) OT *I Machabees* 2 67-68 9 33-42 13 1-6 15 2 4 / *II Maccabees* 6 14 15—(D) OT *II Machabees* 6 14- 5

New Testament *Matthew* 5 38 48 7:2 / *Luke* 6 27 3 7 3 4 18 1-8 / *Romans* 3 5-6 12 17 21 13 4 / *II Corinthians* 10 6 / *I Thessalonians* 5 15 / *II Thessalonians* 1 7-9 / *Hebrews* 10:29-30 / *I Peter* 3 8-9 / *Jude* 7 / *Revelation* 18 1- 9:2—(D) *Apocalypse* 18 1-19:2

4 Homer *Iliad* bk ix [620-643] 63b-c bk xviii [497-508] 135b / *Odyssey* bk i [32 43] 183b c bk ii [195-209] 195a b bk xxi xxii 301a 311a

5 Aeschylus *Agamemnon* [1577 161] 68d-69a / *Choephoroe* 70a 80d esp [306-314] 73a b [400-4 4] 74a / *Eumenides* 81a 91d esp [490-565] 86b-87a

5 Sophocles *Oedipus at Colonus* [229-233] 116b / *Ajax* 143a 155a c esp [430-456] 146d 147a / *Electra* 156a 169 c esp [516-633] 160a 161a [384 1510] 167d 169a c

5 Euripides *Medea* 212a 224a c esp [64-810] 218d 219a / *Electra* 327a 339a c esp [112 167] 328a c, [880-1180] 335a 337d / *Hecuba* 353a 364a c esp [109-1295] 362b 364a / *Heracles Mad* [7 6-814] 371b d / *Orestes* 394a 410d esp [478-606] 398d-400 [1098-1176] 405a d

6 Herodotus *History* bk i 9c 10a 16c 17a 29b-30d bk ii 68d 69a bk iii 91a b 99c 100a 116b-117a bk iv 154a b bk v 177a bk vi 204d 205 bk vii 218a b 237d 239a bk iii 278c 279a bk ix 305 -c 306c 307a 313a 314a

6 Thucydides *Peloponnesian War* k ii 405a b bk i i 424d-429a 429 -434c bk vii 556d 557a

7 Plato *Protagoras* 45 d / *Gorgias* 293b 294c / *Republic* bk x 437c-438c / *Laws* k x 769d 770c

9 Aristotle *Ethics* bk iii ch 5 [1113^{b}21 1114 2] 359d 360a k v ch 4 379b 380b esp [1132^{a}7 19] 379c d ch 5 [1132^{b}21 1133 3] 380b-c ch 11 [1138^{a}7 10] 386b [1138 0-23] 386c / *Rhetoric* bk i c 1 10 [1369^{b}12 14] 612d

12 Lucretius *Nature of Things* bk iii [9-3-1023] 42d-43b

14 Plutarch *Theseus* 4a b / *Solon* 70d / *Dion* 798d

15 Tacitus *Histories* bk iv 267d

18 Augustine *Confessions* bk iii par 16 17c-d / *City of God* bk xii ch 3 344b bk xiv c 15 388d 390a bk xix ch 13 519a 520a bk xxi, ch 11-12 570b 571c

19 Aquinas *Summa Theologica* part i q 19, a 9 ans 116d 117d q 49 a 2 a s 266a-c part i-ii q 46 a 7 818a d

20 Aquinas *Summa Theologica* p rt i-ii q 8, 185c 192d q 108 a 3 rep 2 334a 336b

21 Dante *Divine Comedy* hell, vii [00-1,0] 10c d xx [1-39] 28b-d xxviii 41b-43a esp [130-142] 42d-43a purgatory x [73-9] 68a b xix [70-145] 82b 83a xxiii [t] 88b 89a

22 Chaucer *Reeve s Tale* 225a 232a esp [43 1 4322] 231b 232a / *Tale of Melibeus* par 30-39 413b-422b

23 Hobbes *Leviathan* part i 94a part ii 147b-c

25 Montaigne *Essays* 334d 335a

26 Shakespeare *3rd Henry VI* ct i sc iv [7 180] 74d 76b act ii sc ii [1-55] 78d 79b / *Richard III* act i sc ii [49-109] 108a d / *Titus Andronicus* 170a 198d / *Richard II* act i sc ii 322d 323c / *Merchant of Venice* ct iii sc i [46-76] 419a b act iv sc i [1 400] 425c-429d

27 Shakespeare *Hamlet* act i sc v [74-88] 37d act iii sc iii [73-98] 54a b ct iv sc v [115 20] 60d 62a / *Othello* act i sc i [6-65] 205a 206 act ii sc i [300-311] 216c act iii sc iii [442-479] 226d 227b act v sc ii 238d 243a,c / *Timon of Athens* act v sc iv 419d-420d

29 Cervantes *Don Quixote* part i 68b 73a

31 Spinoza *Ethics* part iv prop 5 schol 439d prop 63 schol 444a

35 Locke *Civil Government* ch ii sect 7 13 26c 28b passim

36 Swift *Gulliver* part i 10b-11a 28a b

37 Fielding *Tom Jones* 20b 21a

38 Montesquieu *Spirit of Laws* bk vi 43a b k xi 86 d

38 Rousseau *Inequality* 351b d

40 Gibbon *Decline and Fall* 617b-c

41 Gibbon *Decline and Fall* 91a 93a 224c 225a 404a

42 Kant *Science of Right* 446a-449c esp 446b-447c

43 Mill *Utilitarianism* 467d-468c 469c-470c 472c d 474b-d

46 Hegel *Philosophy of Right* part i par 93 36a b par 99-100 37b 38a par 103 39b part ii par 220 73a b p r 319 106a addition 63-65 126a c 74 127d 128a / *Philosophy of History* part i 214d 216a

48 Melville *Moby Dick* esp 118a 122b

51 TOLSTOY *War and Peace* BK II 95c BK IX 357d 358b BK XI 505a 511b
52 DOSTOEVSKY *Brothers Ka ama ov* BK XII 398c 399c
53 J MES *Psychology* 225a
54 FREUD *Interpretation of Dreams* 247d 248a

1c Punishment for the sake of reforming the wrongdoer

OLD TESTA IENT *Levit cus* 26 14 46—(D) *Leviticus* 26 14-45 / *II Samuel* 7 14 15—(D) *II Kings* 7 14 15 / *J b* 5 17 18 / *Psalms* 39 10-11 141 5—(D) *Psalms* 38 1 1 14 5 / *P erbs* 3 11 12 13 24 15 10 17 10 19 18 25 20 30 22 15 23 13 14 29 5 17 / *I a ah* 4 4 27 7-9—(D) *Isa as* 4 4 27 7-9 / *Jeremiah* 2 30 5 3—(D) *Jeremias* 2 3 5 3 / *Ezek el* 14 9-11—(D) *E echi l* 14 9-11 / *Zepha iah* 3 1-13—(D) *Sophon s* 3 1 13 / *Mal chi* 3—(D) *M l chias* 3

A O RYPHA *Jud th* 8 25 7—(D) OT *Jud th* 8.21 27 / *W dom of Sol m n* 3 1-6 1 5 16 12 esp 12.25 26 16 2-12 24 28—(D) OT *Book of W sdom* 3 1-6 11 5 17 12 esp 12 25 6 6.2 12 24 28 / *Eccl iasticus* 7 23 22 6 30 2 12-13—(D) OT *E l asticus* 7 5 22 6 30 -2 12-13 / *Baruch* 2 21 33 3 7 4 esp 4.29—(D) OT *Baruch* 2.21-33 3 7 4 esp 4 29 / *II Ma b es* 6 2 17 7 33 1 4—(D) OT *II Mach bees* 6 2 17 7 33 4

NEW TESTAMENT *I Corinth ans* 11 32 / *Hebrews* 12 5 11 / *Revelat n* 3 19—(D) *Apocalypse* 3 19

5 SOP OC ES *Ant gone* [348 1353] 142d
5 EURIP DES *Orest s* [491-525] 399a b
5 ARISTO HANES *Clouds* [13 3 1464] 504b-506
7 PLAT *Pr t goras* 45b d / *G rg as* 267 270c 293b 94c / *Republ c* BK II 321d 322d K IX 426d 427 / *Crit* 485b d / *Laws* K V 688d 689 690d 691b BK IX 743c 744a 747d K X 769d 770c BK XI 782a b K XI 785 786a
9 AR ST TLE *Ethics* BK II C 1 3 [1 4b14 8] 350a K X CH 9 [8 5 13] 434d
10 H POCRATES *Th Law* par 1 144a b
18 AUGU TINE *Conf ssions* K 1 par 14 16 4 5b p r 19-23 5d 7a / *City f God* K XIX CH 16 521d 522a BK XX CH 3 571c 572a / *Chri tia Doctr* BK I CH 16 628 d
19 AQUIN S *Si mma The logica* ART 1 Q 1 A 4 E 3 126c 127c
20 AQUIN S *Summa Th l gica* PART I I Q 79 A 4 158d 159c Q 87 A 2 REP 1 186 187b AA 6 8 189c 192d Q 5 A 2 REP 9 309d 316 P RT II Q 33 550a 558d ART I SUPPL Q 99 REP 3 1078c 1081a
23 HOB S *Let than* RT 1 94a PART II 141b 147 b 157d 158
35 LO KE *T ler t* 1 2c p m
37 F LD NG *T m J n s* 267b-268b 380 381a
38 MONTESQUIEU *Spirit of Laws* BK VI 39d 40b
42 KANT *Practical Reason* 306b-c / *Science of R ght* 446b-447c
43 MILL *Liberty* 271c 272d 302d 312a passi n / *Ut l tariani m* 471d 472d
44 BOSW LL *Johnso* 7d 8a 199c 200d
46 HEGEL *Philosophy of R ght* PART I par 99 37b d / *Ph l sophy of History* P RT I 214d 216a
52 DOSTO VSKY *B others Karama ov* BK II 30b 32a BK XII 395a-401d

1d The preventive use of punishment the deterrence of wrongdoing

OLD TESTAMENT *Deuter omy* 13 10-11 19 19-20 / *Proverb* 10 25 21 1
A OC Y HA *Ecclesiasticus* 23:22 27—(D) OT *Ecclesiasticus* 23 3 37
N W TESTAMENT *I Corinthians* 10 5-11 / *II Peter* 2 6 / *Jude* 7

5 A SCHYLUS *Persians* [739-842] 23a 24b / *Agamemnon* [681-78] 59b 60b / *Eumenides* 81a 91d esp [490-565] 86b 87a
5 SOPHO LE *O dipus the K g* [882-895] 107b / *Ajax* [118 133] 144c / *Elect a* [121 250] 157b 158a [150 510] 169a c
5 EURIPIDES *Med a* [271-356] 214b 215b / *Orest s* [478 606] 398d 400a [917-945] 403b c
6 H RODOTUS *History* BK II 87a b K V 164c
6 THUCYDID S *Pel pon esian War* BK II 400d 401 K II 426b d 427d-428a
7 PLATO *Protagoras* 45b-d / *Gorg as* 93b 294c / *Laws* BK V 690d 691b BK IX 743c 744 747d 757a BK X 769d 770 BK XI 782a b
9 ARISTOTL *Eth cs* BK CH 5 [1113b 1 1114 2] 359d 360a BK X CH 9 [1179 33 8 32] 434 435 / *Rh toric* BK I CH 14 [1375 1 20] 619b
10 HIPPO RAT *The Law* par 1 144a b
15 TACITU *An als* BK III 49d 50a 57a 61c d K X V 151d 152b / *H st ries* BK I 200d
18 AUGUSTINE *C ty of G d* BK XIX CH 16 521d 522a
20 AQU NAS *Summa Theologi a* PART I II Q 87 A 2 R P 1 186 187b A 3 REP 2 187b 188b
23 HOBBE *Levi th n* P T 1 140a 141b 143b d 145c d 157d 158a
25 MON A GN *Es y* 446a b
27 SHAKESP AR *M a ur fo M as* ACT I SC I I 177b d ACT II S 1 178d 184a ACT V C [318-324] 202b
31 S INOZA *Eth cs* PART IV PROP 63 SCH L 444a
35 LOCK *Toleration* 3a / *C v l Go ernment* C II SECT 7 13 26c 28b p m CH X V S CT 59 62b CH XV S CT 171 65a b / *H m U der t nd g* K CH T 13 107d 108
35 HU E *H m U derst d g* CT V D V 6 485a
37 F LD N *T m J ne* 150b

(1 *The general theory of punishment* 1d *The preventive use of punishment the deterrence of wrongdoing*)

38 MONTESQUIEU *Spirit of Laws* BK VI 37d 38a 38d-40a BK XIX 139c
38 ROUSSEAU *Political Economy* 371a c 372c / *Social Contract* BK II 399a
39 SMITH *Wealth of Nations* BK V 309a c
40 GIBBON *Decline and Fall* 175c d 199b
41 GIBBON *Decline and Fall* 83b c 9 b c
42 KANT *Science of Right* 446b 448a b
43 MILL *Liberty* 271c 272d 313a 316b / *Representative Government* 334d 335a / *Utilitarianism* 471d 472d
44 BOSWELL *Johnson* 204b 301c d 335c 344a b 363a b 482a d
46 HEGEL *Philosophy of Right* PART I par 99-100 37b 38a PART III par 232 75c d par 319 106a ADDITIONS 138 139a b / *Philosophy of History* PART I 214d 216a
49 DARWIN *Descent of Man* 314b
52 DOSTOEVSKY *Brothers Karamazov* BK XII 398d-401d
54 FREUD *Civilization and Its Discontents* 787c

2 Personal responsibility as a condition of just punishment the problem of collective responsibility

OLD TESTAMENT *Genesis* 3 16-19 / *Exodus* 20 5-6 34 7 / *Numbers* 14 18 / *Deuteronomy* 5 9-10 24 16 / *II Samuel* 21 1-9—(*D*) *II Kings* 21 1-9 / *II Kings* 14 5-6—(*D*) *IV Kings* 14 5-6 / *II Chronicles* 25 3 4—(*D*) *II Paralipomenon* 25 3 4 / *Jeremiah* 31 29-30 —(*D*) *Jeremias* 31 29-30 / *Ezekiel* 18—(*D*) *Ezechiel* 18
APOCRYPHA *Wisdom of Solomon* 3 11 13—(*D*) OT *Book of Wisdom* 3 11 13 / *Ecclesiasticus* 41 5—(*D*) OT *Ecclesiasticus* 41 8 / *Baruch* 3 7-8—(*D*) OT *Baruch* 3 7-8
NEW TESTAMENT *Romans* 5 12 19 / *I Corinthians* 15 21-22
5 AESCHYLUS *Seven Against Thebes* 27a 39a c esp [597-614] 33c d [653-956] 34b-37d / *Agamemnon* 52a 69d / *Choephoroe* 70a 80d / *Eumenides* 81a 91d
5 SOPHOCLES *Oedipus the King* 99a 113a c / *Oedipus at Colonus* 114a 130a c / *Antigone* 131a 142d esp [582-626] 136b c / *Electra* 156a 169 c
5 EURIPIDES *Suppliants* [214 228] 260b / *Phoenician Maidens* 378a 393d / *Orestes* 394a-410d
6 HERODOTUS *History* BK VII 223c d 238d 239 BK IX 306c 307a
7 PLATO *Protagoras* 45b-d / *Laws* BK IX 746a 751d esp 746a 748c BK XII 785c 786a
9 ARISTOTLE *Ethics* BK III CH 5 359c 361a
12 EPICTETUS *Discourses* BK I CH 18 124a 125
13 VIRGIL *Georgics* I [501-502] 51a
14 PLUTARCH *Camillus* 107b d
15 TACITUS *Annals* BK XIV 152b
18 AUGUSTINE *City of God* BK XIII CH 13 14 366a c BK XIV CH 1 376b d 377a CH 20, 392b BK XXI CH 12 571a c
20 AQUINAS *Summa Theologica* PART I II Q 81 162d 167d
21 DANTE *Divine Comedy* PURGATORY XVI [52-84] 77b d XVIII [19-75] 80a-c
22 CHAUCER *Parson's Tale* par 18 506b-507b
23 HOBBES *Leviathan* PART II 118a b 147c
26 SHAKESPEARE *3rd Henry VI* ACT II SC II [32-50] 79a b / *Henry V* ACT IV SC I [136-202] 553a c
32 MILTON *Paradise Lost* BK III [80-134] 137a-138a [167 216] 139a 140a [274 343] 141b-143a BK X [615-640] 287b 288b
33 PASCAL *Pensées* 434 249b
35 LOCKE *Human Understanding* BK II CH XXVII SECT 18 22 225b 226b
35 HUME *Human Understanding* SECT VIII DIV 76 485a-c
40 GIBBON *Decline and Fall* 451b-c
41 GIBBON *Decline and Fall* 95d
42 KANT *Pure Reason* 169c 170a / *Intro Metaphysic of Morals* 391d 392a / *Science of Right* 447b c
43 CONSTITUTION OF THE U S ARTICLE III, SECT 3 [507-511] 16a
43 FEDERALIST NUMBER 43 140c d NUMBER 66, 202c 203a
43 MILL *Utilitarianism* 471b-472a
46 HEGEL *Philosophy of Right* PART II par 115 118 42b-43b par 132 46b 47a ADDITIONS 74 127d 128a / *Philosophy of History* PART I 215b 216a
51 TOLSTOY *War and Peace* BK VII 275a BK XIV 606b 607a EPILOGUE II 688a-694d
52 DOSTOEVSKY *Brothers Karamazov* BK IV 83c 84a BK VI 168c 169c
53 JAMES *Psychology* 225a

2a Free will in relation to responsibility and punishment voluntariness in relation to guilt or fault the accidental the negligent and the intentional

NEW TESTAMENT *I Timothy* 1 12 13
5 AESCHYLUS *Agamemnon* [1372 1616] 66d 69a / *Choephoroe* [269-305] 72d 73a [1021 1064] 80a c / *Eumenides* [436-469] 86a b [574 777] 87b-89a
5 SOPHOCLES *Oedipus the King* [1297 1415] 111b 112b / *Oedipus at Colonus* [939-999] 123a c / *Trachiniae* [672 730] 176a c
5 EURIPIDES *Heracles Mad* [1255 1357] 376a d
6 HERODOTUS *History* BK I 8b-10a
6 THUCYDIDES *Peloponnesian War* BK II 426b-d 430 432b-c
7 PLATO *Protagoras* 45b d / *Apology* 204b-c / *Timaeus* 474b-d / *Sophist* 557b-558a / *Laws* BK V 688d 689a BK IX 746a 751d 754b-756a

9 A ISTOTLE *Eth cs* BK III C I I 355b d 357b CH 5 359 361a esp [1113b21 1114 2] 359d 360a K V CH 5 [113 b21-31] 380b-c CH 8 [1135 15]-CH 9 [1 36b14] 383a 384d CH II 386b 387a c BK VII CH 6 399d-400c CH 8 401 -402a passim
12 EPICT US *D'scou ses* BK I CI 18 124 125a
12 AUR LIUS *Meditat ns* K II SECT 10 257d 258a BK IV S CT 3 263b BK XII SECT 12 308b c
18 AUGUSTINE *C ty of God* BK X I CH 3 344b K XIV CH II 15 385d 390a pa sim
19 AQU NAS *Summa Theol gica* PART I Q 64 A 2 335d 336d PART I II Q 21 A 2 718a d
20 AQUIN S *Summa Theol gica* PART I-II Q 73 A 5 123a d Q 74 AA I 129a 130a Q 75 137 140d Q 76 AA 3 4 142d 144d Q 78 152b 156 QQ 80-81 159d 167d Q 83 A 3 173 C Q 105 A REP 9 309d 316
21 DANTE *Div ne C medy* HE L, X 15a 16b XXVII [55 136] 40a-41b PURGATORY XVI [5 -84] 77b d XVIII [19-75] 80a c XXI [34-75] 85b d PARADI IV [64-114] 111b d
23 H ES *Levi tha* PART II 139d 140 143b 157d 158a
32 MILTON *P ad se Lost* BK III [80-134] 137a 138a K V [224-245] 180a b / *Samson Ago n t* [373 419] 347b 348b
35 LOCK *Hum U derst nd ng* BK II CH XXI SE T 57 193b c CH XX II CT 8- 2 225b-226b SECT 26 227c d BK IV CH XVII S CT 4, 373c 374a
35 HUM *Human Understand ng* SECT VI I DIV 76 485a c
37 FI LD G *To n Jones* 399c d
42 K N *Pu R o* 169b [fn 1] 169 170 / *I tro Metaphy ic of Mo als* 391c 392 393d
43 MILL *Ut l t sm* 471d-472a 474d
46 HE E *Ph los phy f Right* PART I par 96 36c 37a pa oo 37d-38a PART I P I 5 I 8 42b-43b par 13 46b-47 A DITIONS 56 125b c 6 126 74 75 127d 128a / *Ph l sophy of Hist ry* INTR 165c 166a 168d ART I 207b-c 215b 216a
51 T L TOY *W nd P ace* K VI 275a BK IX 357d 358b K X I 548d 549d E OGUE II 686 687a 688a 694d

2b S nity matur ty and mo l competenc in r l t on to r spons b lity

7 P ATO *P tago as* 45b-d
18 AU USTIN *C ty of God* K XX CH 16 573b 574a
21 D NT *D i C m dy* H LL XXX I [1-9] 49 50c
23 H B S *Levi th* PART I 132b-c 142a b
27 SHAKESP R *Hamlet* A T V SC I [236- 63] 70b c
35 LOCKE *Ci l G vernment* CH VI SECT 54-63 36c 38c pas m
42 KANT *Pure Reason* 169c 170a
43 M LL *L berty* 302d 312 pass m
46 H GEL *Ph losophy of Right* ART II p r 132 46b-47a
51 TOLSTOY *War and Peace* EPILOGUE II 690c d
52 DO TOEVSKY *Brothers Karamazov* BK XII 348b d 401d passim esp 395a 398d
54 FR UD *Interpretation of Dreams* 241b c

3 Punishment in relation to virtue and v ce

3a Rewards and punishments as factors in the formation of moral character

OLD TESTAMENT *Proverbs* 4 1-4 13.24 22 15 23 13 14 29 15
APOCRYPHA *Eccles asticus* 30 1 13—(D) OT *Ecclesiasticus* 30 1-13
NEW TESTAMENT *Hebrews* 2 5-11
5 AESCHYLUS *Eum n des* [681-7] 88b c
5 SOPHOC ES *Art gone* [1348 1353] 142d
5 AR TOPH NES *Cl uds* [1303 1464] 504b-506c
7 PLATO *Pr t goras* 45b-d 46b / *Gorgias* 283b 285a / *Rep blic* K II 313b d BK IX 426d-427a / *S phist* 556d 557a / *Laws* K I 643d BK 653a b BK X 760 761a
9 ARISTOTLE *Eth s* BK II CH 3 [11 4b14 8] 350a K III H 5 [3b21 114a2] 359d 360a BK X CH [1172 8 3] 426a CH 9 [1179 33-8 32] 434a 435a
14 P UTAR H *Lycu gus* 41a-42b
18 AUGUST NE *Co fess ns* K I par 14 16 4 5b par 9-23 5d 7a / *City of God* BK XIX CH 15 16 521a 522a
19 AQUINAS *Summ Th l gica* PART I Q 48 A 6 ONTRARY and R P I 264a d
20 AQUINA *Summa Th l gi a* PART I-II Q 87 A 2 REP I 186 187b Q 95 A I ANS 226c 227c
23 HO BES *Leviathan* P RT II 141a b
25 MONTAIGNE *Essay* 16c d 66 73c 74a 185c d
30 BACON *Advancement of Lea ng* 69d 70a
31 SPINO A *Eth c* P RT III DEF 27 EXPL 419a b
35 LO KE *Human Understand ng* BK I CH II S CT 5-6 105 passim SE T 12 13 107b 108c
35 HUME *H man Understand g* SECT VIII DIV 76 485a
36 SW FT *Gull ver* PART I 8a b
37 FI LDIN *Tom J nes* 41a 380 381a
38 MONT SQU U *Spirit of Laws* K VI 37d 38b 39d-40d pass m K XI 86b K XIX 139
42 KANT *Fund Prin M t phy c of Mo al* 270d 271a / *Pra t l R a on* 306b c / *Intro M taphysic of Mo al* 383a b
43 M LL *Liberty* 302d 312a passim esp 306 307 / *Ut l t anism* 458a b 464b c
44 BOSW LL *J hnson* 191b c 199c 200d 363 b
52 D TOE SKY *B thers K amazov* K 30b 32
54 FR UD *War and Death* 758 759b / *Ci l t n d Its Discontents* 792b 795b / *New I t duct ry Lectu s* 876c d

Punishment in relation to virtue and vice)

3b Vice its own punishment

APOCRYPHA *Ecclesiasticus* 14 5 10—(D) OT *Ecclesiasticus* 14 5 10
7 PLATO *Gorgias* 262a 267c / *Republic* BK IX 417b 418d BK X 436c 441a c / *Theaetetus* 530d / *Laws* BK II 656d 658b BK V 689d 690
12 LUCRETIUS *Nature of Things* BK III [1014–1023] 43a b
12 EPICTETUS *Discourses* BK I CH 28 134b c BK II CH 10 149c d BK III CH 24 206b 208a BK IV CH 5 228a 230b
12 AURELIUS *Meditations* BK II SECT 16 259a BK VIII SECT 55 290b BK IX SECT 4 92a SECT 42 295c 296a c
18 AUGUSTINE *Confessions* BK I par 19 5d BK III par 16 17c d
20 AQUINAS *Summa Theologica* PART I II QQ 85–86 178b 185c Q 87 A 1 ANS and REP 3 185d 186c Q 89 A 1 199a c
23 HOBBES *Leviathan* PART II 163d 164a
25 MONTAIGNE *Essays* 174d 176c 389c d
26 SHAKESPEARE *Richard III* ACT I SC IV [1–75] 114d 115b
35 LOCKE *Human Understanding* BK I CH II SECT 5–6 105a passim
38 MONTESQUIEU *Spirit of Laws* BK VI 39b
42 KANT *Pref Metaphysical Elements of Ethics* 374a c
52 DOSTOEVSKY *Brothers Karamazov* BK XII 381c d 398a b
53 JAMES *Psychology* 83a b
54 FREUD *Civilization and Its Discontents* 793a 794a

3c Guilt repentance and the moral need for punishment

OLD TESTAMENT *Leviticus* 26 40–43 / *I Kings* 8 46–51—(D) *III Kings* 8 46–51 / *Psalms* 6 32 38 5 10 130 143—(D) *Psalms* 6 31 37 50 10 129 142
APOCRYPHA *Wisdom of Solomon* 12 10—(D) OT *Book of Wisdom* 1 10 / *Ecclesiasticus* 20 3 21 6—(D) OT *Ecclesiasticus* 20 4 21 7
NEW TESTAMENT *Luke* 16 27 31 / *Revelation* 2 5 16–22—(D) *Apocalypse* 2 5 16–22
6 HERODOTUS *History* BK I 9c 10a
7 PLATO *Gorgias* 267c 270c 293d 294c
15 TACITUS *Annals* BK I 14d / *Histories* BK III 255b-c
18 AUGUSTINE *City of God* BK XII CH 3 343d 344b BK XIX CH 13 519a 520a
20 AQUINAS *Summa Theologica* PART I II Q 87 A 1 ANS and REP 3 185d 186c PART I II Q 33 550a 558d
25 MONTAIGNE *Essays* 388c 395b passim
27 SHAKESPEARE *Measure for Measure* ACT II SC III [19–42] 184b-c / *Cymbeline* ACT V SC IV [1 29] 481a b

32 MILTON *Samson Agonistes* 339a 378a esp [1 46] 339b 340b [356–380] 347b 348a [66 700] 354a 355a [1156–1177] 364b-365a
38 ROUSSEAU *Political Economy* 372
40 GIBBON *Decline and Fall* 54c 55a
43 MILL *Utilitarianism* 458b-459b
46 HEGEL *Philosophy of Right* PART I par 100 37d 38a PART III par o 73a b
51 TOLSTOY *War and Peace* BK V 221d BK IX 373b 374d
52 DOSTOEVSKY *Brothers Karamazov* BK II 30c 32a BK III 50c 54b BK XII 369a 373c 380c 386a EPILOGUE 404c-408a passim
54 FREUD *Civilization and Its Discontents* 791b-793d esp 792d 793a 793d 795d 796a 797c 798c / *New Introductory Lectures* 831b

4 Crime and punishment punishment as a political instrument

6 HERODOTUS *History* BK VI 191a b
6 THUCYDIDES *Peloponnesian War* BK III 424d-428d
7 PLATO *Laws* BK IX 743a 757d
9 ARISTOTLE *Ethics* BK V CH 4 [1131^b25]-CH 5 [1133 3] 379b 380c CH 11 [1138 4 13] 386b-c / *Politics* BK IV CH 16 [1300^b19-38] 501c d, BK VI CH 8 [1321^b40 1322^a28] 525d 526a BK VII CH 13 [1332 12 16] 536d / *Athenian Constitution* CH 52–53 576b-577b CH 56 par 6-CH 59 par 7 579a 580c / *Rhetoric* BK I CH 12 615c 617c CH 14 619a d
12 LUCRETIUS *Nature of Things* BK V [1136-1160] 76a b
14 PLUTARCH *Cicero* 710c 712d
15 TACITUS *Annals* BK XIV 151d 152b / *Histories* BK I 200c d
18 AUGUSTINE *City of God* BK XIX CH 6 514b-515a
20 AQUINAS *Summa Theologica* PART I II Q 87 A 1 ANS 185d 186c PART II I Q 33 A 1 A 5 and REP 1 550b 551a A 3 ANS 552d 553b A 4 ANS 553b-554b A 6 ANS and REP 1 555a-d
23 MACHIAVELLI *Prince* CH VII 11b c CH VII 14a c
23 HOBBES *Leviathan* PART II 138d 148b CONCLUSION 281a d
26 SHAKESPEARE *2nd Henry VI* ACT III SC I [223 281] 49c 50a
29 CERVANTES *Don Quixote* PART I 68b 73a 177a b
35 LOCKE *Toleration* 3c 4 5b-6a 14a 15a / *Civil Government* CH VII SECT 87–88 44a-c CH XV SECT 171 65a b
36 SWIFT *Gulliver* PART I 28a b 29b
38 MONTESQUIEU *Spirit of Laws* BK VI 37d 43d BK XII 85 92b
38 ROUSSEAU *Inequality* 351b d / *Political Economy* 371a c / *Social Contract* BK II 398b-399a
39 SMITH *Wealth of Nations* BK V 309 c
40 GIBBON *Decline and Fall* 197b 198d 200a 215b 216a 225d 229b 387d 388d 437b-d

(4 *Crime and punishment: punishment as a political instrument 4d Grades of severity in punishment: making the punishment fit the crime*)

9 ARISTOTLE *Ethics* BK III CH 5 [1113^b21-1114^a2] 359d 360a BK V CH 4 [1131^b25]-CH 5 [1133 3] 379b-380c / *Politics* BK II CH 12 [1274^b15 17] 471c / *Rhetoric* BK I CH 14 619a-d
14 PLUTARCH *Theseus* 4a b / *Solon* 70d / *Artaxerxes* 851a b
15 TACITUS *Annals* BK III 57a BK XIV 152d 153b
18 AUGUSTINE *City of God* BK XXI CH 11 570b-571a
20 AQUINAS *Summa Theologica* PART I-II Q 87 A 3 REP 1 187b-188b Q 105 A 2 ANS and REP 9-12 309d 316a PART III SUPPL, Q 99 A 1 ANS and REP 1 2 6 1078c 1081a
21 DANTE *Divine Comedy* HELL, V [72] 7a d VII [100-130] 10c d XII 16b-17d XIV [43-72] 20a b XX [1-39] 28b-d XXVIII 41b-43a esp [130-142] 42d-43a PURGATORY X [97]-XI [9] 68b-69c XIII 71d 73 XIX [0-145] 82b 83a XXIII [1-75] 88b 89a
23 HOBBES *Leviathan* PART II 139c 140a 145d 157d 158a
25 MONTAIGNE *Essays* 23b 24a
27 SHAKESPEARE *Measure for Measure* ACT II SC II [1 6-141] 183b-c / *Coriolanus* ACT III SC I [263 336] 372c 373b
35 LOCKE *Civil Government* CH II SECT II 13 27b-28b
36 SWIFT *Gulliver* PART I 28a b
37 FIELDING *Tom Jones* 399c d
38 MONTESQUIEU *Spirit of Laws* BK VI 37d 43d BK XII 85c 91c BK XXIX 264d 266b
38 ROUSSEAU *Political Economy* 371a b / *Social Contract* BK IV 439a
40 GIBBON *Decline and Fall* 127d 128a 175d 176a 199b-c
41 GIBBON *Decline and Fall* 83b-c 91 94b passim
42 KANT *Science of Right* 446a-448b
43 FEDERALIST NUMBER 74 221d 222d
43 MILL *Utilitarianism* 472 d 474d
46 HEGEL *Philosophy of Right* PART I par 96 36c 37a PART II par 218 72 d par 319 106a ADDITIONS 60 125d 138 139a b / 9 10 30-37 / *II Chronicles* 21 12 0 36 esp 36:21—(D) *II Paralipomenon* 21 1 0 36 esp 36:21 / *Zechariah* 5 1 4—(D) *Zacharias* 5 1 4 / *Malachi* 2—(D) *Malachias* 2

APOCRYPHA *Ecclesiasticus* 21:27 41:8-10—(D) OT *Ecclesiasticus* 21 30 41 11 13 / *Baruch* 1:20-2:7—(D) OT *Baruch* 1:20-2:7

NEW TESTAMENT *Matthew* 25:41 / *I Corinthians* 16:22 / *Galatians* 3 10-14

5 AESCHYLUS *Suppliant Maidens* [524-599] 7c 8d / *Seven Against Thebes* 27a 39a,c esp [653-656] 34b-37d / *Agamemnon* 52a-69d esp [1372 1616] 66d 69a / *Choephoroe* 70a-80d esp [1067 1076] 80d / *Eumenides* 81a-91d esp [94 178] 82a 83a
5 SOPHOCLES *Oedipus the King* 99a 113 c / *Oedipus at Colonus* 114a 130 c esp [1183-1191] 121b-c [1348-1446] 126c 127b
6 HERODOTUS *History* BK III 106b-c
6 THUCYDIDES *Peloponnesian War* BK I 380a d
14 PLUTARCH *Camillus* 107b-d / *Alcibiades* 165a b
15 TACITUS *Annals* BK II 40d-41a
20 AQUINAS *Summa Theologica* PART II-II Q 25 A 6 REP 3 504d 505d
26 SHAKESPEARE *Richard III* ACT I SC II [1 80] 107c 108b ACT III SC III 126c 127a ACT IV SC IV [1 195] 136a 138b / *Richard II* ACT III SC II [129-134] 336d ACT I SC I [114 149] 342c 343a / *Julius Caesar* ACT I I, SC I [253 275] 583b
30 BACON *Advancement of Learning* 97c
32 MILTON *Paradise Lost* BK X [1046-1 4] 297a 298b BK XI [84-98] 301a [162 18] 302b-303a [251 262] 304b-30 [4 0-523] 309b-310b BK XII [101 120] 321b
36 STERNE *Tristram Shandy* 281b-289b 466b 467b
41 GIBBON *Decline and Fall* 150a 423c 469a-c
51 TOLSTOY *War and Peace* BK VII 275a

5b *The wages of sin: the punishment of original sin*

OLD TESTAMENT *Genesis* 3 9-24 6 5 8:21 / *Ecclesiastes* 9 3
APOCRYPHA *Wisdom of Solomon* 2:23 24—(D) OT *Book of Wisdom* 2:23 25
NEW TESTAMENT *Romans* 5 12 21 6:23 8:20-21 / *I Corinthians* 15:21 22 / *Ephesians* 2 1-5

20 AQUINAS *Summa Theologica* PART I II Q 72 A 5 115a 116b QQ 81-83 162d 174b QQ 85 89 178b 204 Q 91 A 6 212 213c Q 94 A 6 225d 226b PART II II Q 4 A 2 499c 500d Q 5 A 7 506a d
21 DANTE *Divine Comedy* PURGATORY III [6 45] 56a b XXVIII [91-96] 97a XXIX [22 30] 97d 98a PAR E VII [19-120] 115b 116b
22 CHAUCER *Pa on s Tale* par 18 507b
23 HOBBES *Leviathan* PART I 112a b PART III 191b c
30 BACON *Novum Organum* BK II A H 52 195d
32 MILTON *P ad s Lost* BK III [167- 16] 139 140 [274-343] 141b 143a BK X [780- 89] 264b 273a BK X 274a 298b esp [103 1 3] 276b 277 [2 9-409] 279b-283a [585-640] 287a 288b BK XI [84-98] 301a K XI [423]-BK X I [371] 308b-327a
33 PASCAL *Pen ees* 430 245a 247b 434 435 248a 251a 446-450 252a 253a
44 BOSWELL *Johnson* 482a
46 HEGEL *Ph losophy of History* PART I 304d 305b

5c The pain of remorse and the torment of conscience the atonement for sin

OLD TESTAMENT *Leviticus* 6.29-34 c p 16 29 16 31 / *II S muel* 12 9- 3--(D) *II K gs* 12 9-23 / *I Ki gs* 8 3 -50--(D) *III Ki g* 8 31-5 / *II Chr ni les* 6 24 42 7 1 14 33 1 -19--(D) *II Par lipomenon* 6:24 42 7 14 33 12 9 / *Job* 42 5-6 / *Psalms* 32 34 18 35 13 15 38 8 51 69 7 12 102 1 12--(D) *P alms* 31 33 19 34 13 5 37 9 50 68 8 13 101 1 3 / *Pr verb* 5 8 1 / *Jerem ah* 19--(D) *Jeremias* 19 / *Da iel* 9 3 2 / *Jo l* 1 1 2 7 / *J nah* 3--(D) *J n* 3
APOCRYPHA *Wi dom of S lomon* 5 1 3 11 16 12 9 23 17--(D) OT *B ok of W sdom* 5 1 14 11 17 12 19 23 17 / *E clesiasticus* 14 1 2 17 24 26 8 21--(D) OT *Eccles ast cus* 14 - 2 17.20-24 18 21 / *I Ma cab s* 6 15 esp 6 12 13--(D) OT *I Ma hab s* 6 1 15 esp 6 12 13
NEW TESTAMENT *M tthew* 3 1 12 4 8 1 .20-21 27 3-5 / *M k* 1 14 15 / *Luke* 3 7 4 5 32 7 36-5 10 13 3 -5 15 1 2 16 27-31 / *John* 8 1 / *Acts* 3 19 17 3 26 / *II Cor thians* 7 8 1 / *II Tim thy* 2.25 26 / *H brews* 12 16-17 / *James* 4 8 / *II Peter* 3 9
5 AESCHYLUS *Choephoro* [1010-1076] 80a d
5 SOPHOCLES *Ant g ne* [257 1353] 141d 142d / *Aj x* [646-683] 148c 149
5 EURIPIDES *A d om he* [8 2-879] 322a c / *Electra* [1177 1232] 337d 338a / *Hera le Mad* [2 9-1428] 375c 377d / *O stes* [1-423] 394a 398b / *Iph genia Amo g the T ur* [924-986] 419a d
9 ARISTOTLE *Ethics* K IX CH 4 [1 66^{b}11 4] 419d-420a

12 LUCRETIUS *N t re of Things* BK II [978-1023] 42d 43b BK V [1151 1160] 76a b
15 TACITUS *Annal* BK VI 87b c / *Histo ies* K 1 255b-c
18 AUGUSTINE *C fess o s* BK II par 1 9a par 9 10d par 17 12d 13a BK par 5 14b K IV par 14 22d 23a BK V par 2 27b c BK X p r 65-66 88a b / *City of God* K XIV CH 8 381 383a
19 AQUINAS *Summa Theologica* PART I II Q 35 A 5 REP 1 775d 777a Q 37 A 2 REP 1 784c 785b
20 AQUINAS *Summ The l gica* PART I I Q 87 A 6 189 190c A 7 ANS and REP 3 190c 191d A 8 AN 191d 192d PART III SU L Q 97 A 2 1066d 1067b Q 98 A 1073b 1074a A 7 1076d 1077b
21 DANTE *D i e Comedy* HELL XXX [91 148] 45 46a PURGATORY II [106] III [5] 55c 56a IV [97 135] 58c d IX-XXV 65d 96a esp X XII 67b 71d, XVII [76-145] 80d 81b XIX [70-145] 82b 83a XXI [34-75] 85b d XXII [1-75] 88b 89a XXX XXXI 99b 102b
22 CHAUCER *Phys ci n s T le* [2 11-2] 370b 371a / *Pars n Tale* par 1 15 495a 506b par 91 103 547a 550a
25 MONTAIGNE *Essays* 14b 174d 176c
26 SHAKESPEARE *Richa d III* ACT I SC IV 114d 117c A T V SC I I [78 206] 145c d / *Richard II* ACT V SC VI [30-52] 351c d / *King J hn* ACT V SC [2 5 48] 396d 397a / *Mer h nt of Venice* ACT II C II [1 33] 412a b
27 SHAKESPEARE *H mlet* ACT I SC II [616-633] 46 d A T III SC III [36-72] 53d 54a S IV 54b 56d ACT IV C V [6-20] 59d / *Oth llo* ACT V SC 238d 243a c / *K g Le* ACT C IV [3-36] 264 / *Macb th* ACT I 291a 292a A T III C II 296b 297a SC IV 297c 299b A T V SC I 306b-307a / *Cymb l ne* ACT V SC I [1] SC II [1] 479a c
29 CERVANTES *Don Qu xote* ART I 123 b
31 SPINOZA *Ethics* PART I I PROP 51 SCHOL 411d 412 PART IV PRO 54 440b c
32 MILTON *Parad s Lost* BK IV [3 4] 153a 154b BK X [1 42 1189] 270 273 / *Sams n Ago i s* [502-5] 350b 351a [606-63] 352b 353b
35 LOCKE *Ci l Government* CH IX 53c 54d pass m
36 STERNE *T t am Shandy* 257a 266b
37 FIELDING *Tom J ne* 267b-c 398d 399a
40 GIBBON *D l n a d F ll* 54c 55 191b c 199 c 452b-d
42 KANT *Practic l Re son* 306d 307d 333 c / *Pref M t physic l Element of Ethics* 379b d / *Judgement* 593a d
43 MILL *Ut lit rian sm* 458b-459b
46 HEGEL *Phil s phy of History* ART 304 d PART IV 354 -c
47 GOETHE *F ust* RT I [3776-3834] 92a 93b P RT II [384-51] 277a 280a
48 MELVILLE *Moby Dick* 34b-36b

(5 *The punishment for s n 5c The pa n of re morse and th torm nt of conscience the atonement for sin*)

49 DARWIN *Descent of Man* 312d 314c
51 TOLSTOY *War and Peace* BK V 216a d BK VIII 321b d BK XIV 606a 607a
52 DOSTOEVSKY *Brothers Karamazov* BK II 24 c 30b 32a BK III 46c-47b BK VI 159c 163d BK VII 184b 188a BK VIII 217c 218c BK XII 381c d 395a 398d E ILOGUE 404c 408a passim
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5d The modes of divine punishment here and hereafter temporal and eternal

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19 AQUINAS *Summa Theologica* PART I Q 3 A 2, REP 2 15c 16a Q 64 333d 338d Q 66 A 3

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(5 *The punishment for sin. 5e The justice of divine punishment*)

27 SHAKESPEARE *King Lear* ACT III SC II [42–59] 263b-c ACT IV SC II [37–80] 270d 271b ACT V SC I I [170–174] 281a / *Cymbeline* ACT V SC IV [11–29] 481b / *Winter's Tale* ACT III SC II [125 155] 502c 503a
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35 LOCKE *Human Understanding* BK II CH XXI SECT 62 194c d
36 STERNE *Tristram Shandy* 282a 287b
44 BOSWELL *Johnson* 482 d 539d 540a
48 MELVILLE *Moby Dick* 380b 381a
52 DOSTOEVSKY *Brothers Karamazov* BK XI 337a 346a
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5e(1) The justification of eternal suffering in Hell or Hades

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APOCRYPHA *Judith* 16 17—(D) OT *Judith* 16:20–21 / *Wisdom of Solomon* 4 16–5 14—(D) OT *Book of Wisdom* 4 16–5 15 / *Ecclesiasticus* 7 16–17 18.22 24 21 9–10—(D) OT *Ecclesiasticus* 7 18–19 18.22 24 21 10–11
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4 HOMER *Odyssey* BK XI [568–600] 248d 249a
5 ARISTOPHANES *Frogs* [37 159] 565d 566a
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18 AUGUSTINE *City of God* BK XIII CH 2 360b-361 c I 12 365d 366a K XI CH 1 376b d 377a BK XIX CH 13 519 520a C I 28 529d 530a,c BK XX C I II 12 5 0b 571c CH 16–18 573b 575b CH 23 24 576c 579d
19 AQUINAS *Summa Theologica* PART I Q 2 A 4 REP 1 126c 127c Q 63 A 8 ANS 332c 333b
20 AQUINAS *Summa Theologica* PART I II Q 9 A 4 REP 2 158d 159c Q 87 AA 3–5 187b 189c PART III SUPPL, Q 94 1040d 1042c QQ 9 -99 1066a 1085a c
21 DANTE *Divine Comedy* HELL 1a 52d esp III 4a 5b V [1–51] 7a-c VI [94 115] 9b-c, XI 15a 16b XIV [16–72] 19c 20b XXVII [55 136] 40a 41b XXVIII [112 14] 42c-43a XXXIII [91 15] 50c 51a PARADISE XV [10–12] 128c
23 HOBBES *Leviathan* PART IV 254a b
26 SHAKESPEARE *Richard III* ACT I SC IV [42–63] 115a b
35 LOCKE *Human Understanding* BK II CH XXI, SECT 62 194c d
44 BOSWELL *Johnson* 363a b 514d 515a
52 DOSTOEVSKY *Brothers Karamazov* BK VI, 169c 170b BK XI 337a 346a

5e( ) The necessity of expiation in Purgatory

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18 AUGUSTINE *City of God* BK XX CH 25 554c 555a BK XXI CH 13 571c 572a CH 16 5 3b-574a CH 24 577b 579d
20 AQUINAS *Summa Theologica* PART III SUPPL, Q 69 A ANS and REP 2 886c 887d A 7 891d 893c Q 97 A 1 REP 2 1066b-d
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6 HERODOTUS *History* BK III 95d 97c
9 ARISTOTLE *Ethics* K IV CH 5 [1126a9–3] 373a c BK IX CH 4 [1166b12 24] 419d-420a
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For Another discussion of the distinction between the pain of sense and the pain of loss *see* PLEASURE AND PAIN 4e

The general problem of the justice or utility of punishment *see* JUSTICE 10c LAW 6e(2)

Responsibility as a condition of just punishment *see* LIBERTY 3c SIN 6a–6b VIRTUE AND VICE 5c WILL 5b(4)

Rewards and punishments as factors in moral training *see* EDUCATION 4 FAMILY 6d PLEASURE AND PAIN 8a 10a VIRTUE AND VICE 4d(2)

The discussion of punishment as a sanction of law *see* LAW 6a and for the general theory of crime and its punishment *see* JUSTICE 10c LAW 6e–6e(3)

Another consideration of the penal use of labor *see* LABOR 1c SLAVERY 3a

The sacramental aspect of the punishment of sin *see* SIN 4e and for the nature and justice of d vine punishment *see* GOD 51 HAPPINESS 7c(3) IMMORTALITY 5d–5e JUSTICE 11a SIN 6c–6e

Other discussions of the sense of sin and of repentance and of the desire or need for punishment *see* PLEASURE AND PAIN 8c SIN 5

ADDITIONAL READINGS

List d b l a vo k ot in l d d in *G t B k of th W tern W ld* but rel ant to the id a and top cs with wh h this hapter d als The e work are d v ded into two g oup

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—— *The Rat l f Pu shment*
—— *Th R t on l f Rew d*
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Chapter 75 QUALITY

INTRODUCTION

IT is sometimes supposed that the fundamental categories in terms of which men think they are describing reality or their experience merely reflect the conventions of their language Substance and attribute—and among attributes quality and quantity—happen to be fundamental categories in western thought it is held only because the group of languages which the western cultures use all have a grammatical structure that involves a distinction between noun and adjective and between different kinds of adjectives It is said for example that Aristotle s enumeration of the categories is merely a verbal classification based on Greek grammar When he says that the basic terms of discourse represent substances qualities quantities relations and so forth he is recognizing the grammatical difference between such words as man and white or between white and six feet tall and double The lineaments of reality the varieties of being or the modes of experience are not it is held thereby finally described

In the tradition of the great books another interpretation generally prevails Even those who disagree in one way or another about the basic categories *do not regard them as conventional* or of linguistic origin Kant for example disagrees with Aristotle s listing of the categories He makes substance a mode of relation rather than coordinate with quality quantity and relation He calls his categories transcendental to indicate that they are not drawn from experience and that as *a priori* forms of thought they determine the structure of all possible experience Aristotle on the other hand draws his categories from experience He thinks that they represent fundamental modes of being and that they are therefore the basic concepts in terms of which thought apprehends reality Despite all these differences Kant and Aristotle agree that the categories signify real—not verbal—distinctions Their agreement on this point seems to be shared even by those like Hume who question our ability to know whether substances exist or those like Berkeley who question the validity of the distinction between quality and quantity

In one sense no one questions the existence of qualities as they do the existence of substances—the enduring things, material or otherwise in which qualities are supposed to inhere Everyone somehow acknowledges the hot and the cold the light and the dark, the moist and the dry the hard and the soft But such acknowledgement does not preclude a number of basic questions about quality on which much disagreement exists

Are qualities attributes? Do they exist that is only as *qualifiers* only as belonging to some thing else? Or do they exist independently in and of themselves? If qualities are attributes do they belong to things quite apart from our experience of them or do they belong to things only as experienced and have no separate reality? Do things have in reality certain attributes that cause in us the experience of other traits which we then attribute to the things themselves?

Are all the attributes of things whether in or apart from experience to be conceived as qualities and if so are there different kinds of qualities? Or is quality only one kind of attribute and if so how is quality related to other kinds of attributes? Is quality for example distinct from quantity dependent on quantity reducible to quantity affected by quantity?

These questions appear to be related in ways which make the issues they raise dependent on one another If, in addition their presuppositions and implications are observed it will be seen that they cannot be fully discussed without entering into matters considered in other chap-

ters such as the notions of substance and accident in the chapter on BEING the theory of experience and the various accounts of sense perception and the objects of sense in the chapters on EXPERIENCE and SENSE and of course some of the principal topics considered in the closely related chapter on QUANTITY

SPINOZA DISTINGUISHES between substance and mode as that which exists in itself and that which exists in another thing He lays down as an axiom that everything which is is either in itself or in another Whether or not qualities are modes of substance it seems to be clear that Spinoza would not call them substances The notion of qualities existing in themselves and not as the qualities *of* anything seems to be self contradictory As Descartes points out to assert the existence of real accidents by which he means the existence of qualities or quantities apart from substances is to deny the distinction between substance and accident Substance he writes can never be conceived after the fashion of accidents nor can it derive its reality from them whereas no reality can be ascribed to [accidents] which is not taken from the idea of substance

Anyone who acknowledges the distinction between substance and accident also conceives qualities as accidents or attributes *i e* as existing in the things they qualify Spinoza Descartes Locke and Aristotle do not conceive substance in the same way nor do they all use the word accident to name the characteristics which inhere in substance Locke for example uses the word quality with almost the same generality that Spinoza gives to the word mode or Descartes and Aristotle to accident And the word substance Locke uses in a sense that is nearer to Aristotle s meaning for the word matter when in trying to conceive bare substance as the underlying I know not what Locke defines this substratum as that which supports qualities Apart from its qualities substance has no positive characteristics

Nevertheless such differences in theory leave untouched the point of agreement that qualities do not float freely—without any support—in either reality or experience Even Berkeley s denial of matter or of bodies existing apart from their being perceived does not turn qualities into substances for qualities *as perceived* are the qualities of bodies *as perceived* and both together have their existence *in* the perceiver

The contrary view—that qualities exist in and of themselves—does not seem to receive clear or explicit expression in the tradition of the great books It may be implied in the conception of experience which Hume develops more fully in the *Treatise on Human Nature* than in the *Enquiry* There it seems to be supposed that each element of experience has the same reality as any other that each stands by itself without any perceptible dependence upon any other and that it has no existence beyond its momentary appearance On this view no enduring substances exist In addition it is as appropriate to call the elements of experience qualities as it is to call them anything else. Experience can be described as nothing but qualities and relations—or as qualities related by succession and contiguity

The notion that experience is a continual flux in which nothing has a continuing identity from moment to moment seems to be basic to any theory which denies substances and affirms the independent reality of qualities The theory of qualities which Plato attributes to Heraclitus or his followers illustrates this. Their first principle Socrates tells Theaetetus is that all is motion and upon this all the affections of which we were just now speaking are supposed to depend there is nothing but motion which has two forms one active and the other passive both in endless number and out of the union and friction of them is generated a progeny endless in number having two forms sense and the object of sense

For example when the eye and the appropriate object meet together and give birth to whiteness and the sensation connatural with it then while the sight is flowing from the eye whiteness proceeds from the object which combines in producing the color This is true of all sensible objects hard warm and the like which are similarly to be regarded not as having any absolute existence but as being all of them generated by motion in their intercourse with one another for the agent has no existence until united with the patient and the patient has no existence until united with the agent

And from all these considerations Socrates says there arises a general reflection that there is no self existent thing but everything is be coming and in relation

Socrates explains that for those who assert a universal flux qualities are not only the prod ucts of motion but also are themselves in motion— not even white continues to flow white and whiteness itself is a flux or change which is passing into another color There is no need to refute this doctrine Socrates thinks since it refutes itself by its unintelligibility or worse its inability to say anything definite in conse quence of denying that words can have a con stant meaning from moment to moment

Aristotle concurs in this attitude toward the most extreme view of the professed Heracli teans but goes on to remark that not even at different times does one sense disagree about the quality but only about that to which the quality belongs I mean for instance that the same wine might seem if either it or one s body changed at one time sweet and at another time not sweet but at least the sweet such as it is when it exists has never yet changed The sweet thing may become sour either in itself or to us but sweetness itself never becomes sourness

THAT QUALITIES DO NOT change into one an other whereas substances undergoing altera tion change from one quality to another seems to Aristotle to distinguish quality from substance The most distinctive mark of substance he writes appears to be that while remaining numerically one and the same it is capable of having contrary qualities Thus one and the same color cannot be wh te and black But the same individual person is at one time white at another black at one time warm at another cold at one time good at another bad The qualities do not change but the substance in changing passes from one quality to its contrary (The difference be tween change of quality or alteration and the other types of change which substances can un dergo is discussed in the chapter on CHANGE)

Aristotle suggests another mark of d stinc tion between substance and qual ty One substance he says never sta ds to another as ts contrary in the way in which qualities are contrary to one another like hot and cold white and black good and bad A quality may have a correlative as well as a contrary *e g* if knowl edge is a quality of mind the object known is its correlative whereas ignorance of the object is the contrary of knowledge. In some cases the contrary qualities may be the extremes or limits of a continuous series of intermediates *e g* white and black with all the intermediate greys In some cases as with knowledge and ig norance the contrary qualities have no inter mediates (Contrariety and correlation most frequently exemplified by qualities are con sidered in the chapter on OPPOSITION)

Still another mark of distinction between substance and quality according to Aristotle is that qualities *do* and substances *do not* admit of variation in degree One man cannot be more man than another he writes as that which is white may be more or less white than some other white object The same quality moreover is said to subsist in a thing in varying degrees at different times A white body is said to be whiter at one time than it was before or a warm body is said to be warmer or less warm than at some other time

This observation raises a number of ques tions Does variation in the degree of a quality *from time to time imply that qualities them* selves undergo change just as substances un dergo change in quality? Do they remain one and the same in kind while varying in degree? Is this change which qualities undergo as they increase or decrease in intensity a change in *quantity? Furthermore* does the fact *that* something white can become more or less white mean that a quality can have a certain quantity even as a body can? Aquinas suggests an answer by distinguishing between what he calls the dimensive quantity of bodies and the virtual quantity of qualities Virtual qu ntity is the degree or intensity wh ch non-quantitative at tributes may possess—such personal qualities as virtues and habits or such corporeal qualities as colors and textures

But this still seems to leave a very difficult question to be answered How can qualities have the attribute of quant ty w thout becom ing substance ? On the principle wh ch both Aristotle and Aqu nas ccept—that accidents exist only in substances—how can one kind of

ticle of matter though less than to make itself singly perceived by our senses Locke s enumeration of these original or primary qualities of body which we may observe to produce simple ideas in us *viz* solidity extension figure motion or rest and number closely resembles Newton s list of the universal qualities of perceptible bodies and of their least particles or atoms

In contrast the secondary qualities such as colors sounds tastes etc are nothing in the objects themselves but powers to produce various sensations in us by their primary qualities *i e* by the bulk figure texture and motion of their insensible parts From whence Locke declares I think it is easy to draw this observation that the ideas of primary qualities of bodies are resemblances of them and their patterns do really exist in the bodies themselves but the ideas produced in us by these secondary qualities have no resemblance of them at all There is nothing like our ideas existing in the bodies themselves They are in the bodies we denominate from them only a power to produce those sensations in us what is sweet blue or warm in idea is but the certain bulk figure and motion of the insensible parts in the bodies which we call so

Locke thinks the sensation of pain confirms this insight As the piece of steel which by its corporeal properties has the power to produce pain in us does not itself have the quality of pain so it does not have anything corresponding to the ideas of blueness or coldness which it produces in us except the power to produce these ideas through the action of its primary qualities on our senses Yet Locke maintains that all our simple ideas of quality—not only of primary but al o of secondary qualities— agree with the reality of things By *agreement* he does not mean *resemblance* in the sense of copying and tl erefore he thinks he can without inconsistency deny any *resemblance* between sensations of color or taste and the secondary qualities of bodies while saying that if *sugar produces* in us the ideas we call whiteness and sweetness ve are sure there is a power in sugar to produce those ideas in our minds or else they could not have been produced by it

Locke s point however is sometimes given exactly the opposite implication Earl er thinkers who do not speak of primary and secondary qualities attribute to bodies only the characteristics which Locke calls primary and give what he calls secondary qualities no reality at all that is no existence outside the mind The secondary qualities are not qualities of things, but of sensations or images Descartes for example says that nothing belongs to the nature or essence of body except length breadth and depth admitting of various shapes and various motions On the other hand colors, odors savours and the rest of such things are merely sensations existing in my thought and differing no less from bodies than pain differs from the shape and motion of the instrument which inflicts it

Hobbes similarly regards the various sensible qualities as feelings in us—the seemings or fancies of sense All these qualities called sensible are in the object that causes them nothin but so many several motions of the matter The object is one thing the fancy is another One type of absurd assertion in the opinion of Hobbes consists in giving the names of th accidents of bodies without us to the accidents of our own bodies as they do that say *the color is in the body the sound is in the air* etc"

The attributes or accidents which Descartes and Hobbes assign to bodies seem to be quantities rather than qualities Accordingly where as Locke attributes both primary and secondary *qualities* to bodies Hobbes and Descartes seem to be saying that bodies differ from one another only quantitatively and that qualities or qualitative differences occur only in the realm of sense or thought Expounding the atomism of Democritus and Epicurus Lucretius appears to make precisely this point when he says that the first beginnings or atoms are characterized only by size weight shape and motion Th bodies of matter he writes have no color at all They are bereft not only of color they are also sundered altogether from warmth and cold and fiery heat and are carried alon barren of sound and devoid of taste" These qualities caused by the blo vs of the atoms upon the sense organs of animals are the qualities of sensations not of things

THE CRITICS OF THIS THEORY—whether in the formulation of Locke or in that of Descartes,

Hobbes and Lucretius—seems itself to take two forms Aristotle for example criticizes Democritus and the atomists for treating perceptible qualities differently from perceptible quantities According to his own theory of the objects of sense some like colors sounds odors flavors—which Locke calls secondary qualities and the others simply qualities —are the proper objects of the special senses, such as sight hearing smell taste In contrast to these proper sensibles each exclusively perceived by one and only one sense there are the common sensibles such as size and shape number movement and rest which can be perceived commonly by several senses e g shape is visible and tangible motion is visible and audible Such sens ble attributes of body which Locke calls primary qualities, Aristotle no less than Hobbes or Lucretius regards as quantities not qualities. Reporting his view Aquinas writes that the common sensibles are all reducible to quantity

Aristotle s critical point seems to be that the atomists reduce the proper to the common sensibles as Democritus does with white and black for he asserts that the latter is a mode of the rough and the former a mode of the smooth while he reduces savours to the atomic figures The atomists sometimes make the opposite error of representing all objects of sense as objects of touch. But in either case they have no ground in Aristotle s opinion for giving to certain sensible attributes—whether these be tangible qualities or the commonly sensible quantities—an objective reality they deny to other sensible traits like colors sounds and odors

Aristotle s theory of sensation and the sensible is discussed more fully in the chapter on SENSE. According to it the qual ties no less than the quantities perceptible by sense have real or actual existence as the attributes of bod es On this score Aristotle does not differentiate between qualities (the proper sensibles) and quantities (the common sens bles) Just as a body actually has the shape we pe cei e it to ha e so it actually has the color we perceive it to have on the suppos t on of course that our perception is accurate in both cases If the senses are fall ble at all we are less prone to make errors, Aristotle thinks in the field of the proper than of the common sensibles e g the stick in water which looks bent to the eye feels straight to the hand

PRECISELY THE OPPOSITE direction seems to be taken by Berkeley and Hume Where Aristotle criticizes the atomists for treating quantities (or common sensibles) as objective and qualities (or proper sensibles) as subjective Berkeley criticizes Locke for treating primary and secondary qualities differently Where Aristotle s own theory assigns the same reality to all objects of sense granting them an actuality apart from perception, Berkeley makes the actuality of the primary as well as the secondary qualities dependent upon their being perceived

Some there are writes Berkeley who make a distinction betwixt *primary* and *secondary* qualities By the former they mean extension figure motion rest sol dity or impenetrability and number by the latter they denote all other sensible qualities as colors sounds tastes and so forth The ideas we have of these they acknowledge not to be the resemblances of anything existing without the mind or unperceived but they will have our ideas of the primary qualities to be patterns or images of things which exist without the mind n an unthinking substance which they call Matter

Berkeley then argues that the so-called primary qualities are incapable of being separated in reality or thought from the secondary qual it es and that therefore, the one like the other exists only in the mind In short let anyone consider those arguments which are thought manifestly to prove that colors and tastes exist only in the mind and he shall find they may with equal force be brought to p ove the same *thing of extens on figure and motion* His own arguments he thinks plainly show it to be imposs ble that any color or extension at all or other sensible quality whatsoever should exist in any unthinking subject without th mind or in truth that there should b such th ng as an outward object

Hume professes to adopt Berk ing It is universally allowed b quirers he writes that all th it es of obje ts such as h whit bla k, tc. ar

35 BERKELEY *H man Knoul dge* SECT 9-15 414d-416a SECT 25 417d-418a S CT 73 427b-c SECT 102 432d 433a
35 HUME *Human Under t ndi g* SECT XII DIV 122 505c-d
42 KANT *Pure Reas n* 15b- 23a 24a 29d 33d esp 30c 31a 31d 32 32d 33b [fn 1] 66d 72c esp 68a 72 211c 213a
46 HEGEL *Ph losophy of Ri ht* PART I par 63 28b-c ADDITION 40 122d 123b
50 MARX *Capital* 149d
53 JAMES *Psychology* 320a 322a

3*b* Shape or figure s qualified quantity

8 ARISTOTLE *Cat gories* CH 8 [10 11 16] 15a b [1a5-14] 16a b / *M t phy ics* BK V CH 14 [10 0a35-b1] 541
11 EUCLID *Elements* BK VI DEFINITIONS 16-19 127b
11 N COM. CHUS *Arithmetic* K I 831d 841
17 PLOTINUS *S xth Ennead* TR III CH 14 288b 289a
19 AQUINAS *Summa Theologica* PART I Q 7 A I REP 2 31a d Q 78 A 3 R 2 410a-411d
20 AQUINAS *Summ The l gica* PART I Q 49 ANS 2b-4a PART III Q 2 A I ANS 710a 711c
23 HOB ES *Leviath n* PART IV 262b
31 DESCARTES *Geometry* 295a 353b esp BK I 298b-304a BK II 308 314b
33 PASCAL *Arithmet al Tri gl* 455a-456a
42 KANT *Pure Reason* 212
53 JAMES *Psychology* 548b 552a

3*c* The degrees or amounts of a quality n tens ty and extens ty the qu nt tat ve conditions of variation n quality

7 PLATO *Philebus* 615c 616
8 ARI TOTLE *Categ ies* CH 5 [3b3 4 9] 8a b CH 7 [6b20- 6] 11b CH 8 [10b 6- 14] 15d 16b CH 10 [a2 5] 17b-c / *Top cs* K III CH 5 166b-c / *Phy s* BK IV CH 9 [217a34 b 1] 297b / *Met physics* K IV CH 7 [11b29-37] 531d K X CH I [52b 53b8] 578d 580a CH 3 [054b6-1] 581b CH 7 584 585b K XI CH 3 [1061 18- 8] 589b c
9 ARI TOTL *History f A im ls* K VI CH I [588 18-b4] 114b d / *Parts of A im ls* K CH [648b12-649b9] 173a 174 / *Ethic* BK II CH 6 351 352d K X H 3 [1173 4 29] 427b-c
12 LU R TIU *N tur f Th g* K II [8 6-833] 25c BK IV [687 5] 53b-c
17 PLOTINUS *S xth En ad* TR III CH 20 292d 293a
18 AUGU TINE *City f G d* BK XI CH 10 328b
19 AQUINAS *Summa Theologica* ART Q 4 A 3 ANS 22b-23b Q 8 A 2 RE 3 35c 36b Q 42 A I REP I 224b-225d Q 45 A 5 R 2 3 245c 247 Q 48 A 4 AN and R 3 262a 263 PART I II Q 22 A 2 R I 721c 722c
20 AQUINAS *Summa Theologica* PART I II Q 50 A I REP 3 6a 7b QQ 52-53 15d 22d Q 54 A 4 R P I 3 25b d Q 72 A 7 ANS 117a 118a PART II II Q 5 A 4 412d 413c Q 4 AA 4 10 491d 498a PART III Q 7 A 12 754c 755c
28 GALIL O *Two New Sciences* IRST D Y 131d 132a THIRD DAY 200b 202a 205b d
30 BACON *Novum Organum* BK II A H 13 145b 148d
34 N WTON *Principl s* BK III RULE III 270b 271a / *Opt cs* BK I 431 -443a BK II 458b 460 466a-467b 472b-474 482b 485a
35 LOCKE *Human Understa ding* BK II CH XVI SECT 3 165d 166a CH XVII S CT 6 169a b CH XXVIII S CT I 228 BK IV CH II SECT 11-13 311c 312b
42 KANT *Pure Reas* 68 72
45 LAVOISI R *Elements of Chem try* PART I 14a b PART III 99d 103b
45 FOURIER *Theory of H t* 169a 172a 177a 193a
45 FARADAY *Res ches n Electricity* 411c 412c
53 J M S *Psychology* 319b-322a esp 319b 320a 329a 330a 346a b 540a 547a esp 541a 544a 547a
54 FREUD *Hyster a* 87a / *I terpretat on of D eams* 384d / *Na c ssism* 403d 404a / *Bey d the Pleasu e Principle* 639b-d

3*d* The p ority of quality or qu nt ty in re l t on to form m tter or substance

8 A TOTL *Phy i s* K I H 2 [85a20-b4] 260a b BK V CH 3 [10b1-8] 289b / *Meta phy ic* BK IX CH I [1 45b28 32] 570b BK X H I [105 b I 53b8] 578d 580a BK XI CH 3 [6 a9-b4] 589c BK XI CH I [069 18 5] 598 / *Sen e and the Sensible* CH 6 [445b4-446a2] 683b-684c CH 7 [449a21-30] 688d 689a
17 PLOTI US *S cond Enn d* TR V CH 13 55c / *Fourth Ennead* TR VII CH 8 196a b / *Sixth E nead* R III CH 15 289 -c
19 AQUI NA *Summa Theol gica* PART I Q 3 2 CONTRARY 15 16 Q 78 A 3 REP 2 410a 411d Q 8 A I REP 2 451c-453
20 AQUINA *Summa Theologica* PART I II Q 52 A ANS 15d 18a PART III U PL, Q 83 A 2 ANS 976c 978c
31 DES ARTE *Rules* XI 18d 19c / *Obj ctions and Replies* 162d 165d esp 164d 165a 228c 229 231a b
35 LOCKE *Human Understand g* BK II CH VIII SECT 9- 6 134c 138b passim CH XXI SECT 3 178d CH XXIII SECT 9 206b-c SECT 37 214a b CH XXXI ECT 2 239b-d
35 BERK EY *Human Kn uledg* S CT 9-15 414d-416a esp CT 414d 415 T 73 427b-c
42 KANT *Pur Re n* 15b-c 41c-45b
46 H G L *Ph l sophy f Right* T I par 63 28b-c

4 The rel tion of qualities to one another

4a Qualities which imply correlatives

8 ARISTOTLE *Cat gories* CH 7 [6^{b}4–8] 11a CH 8 [11^{a}20–39] 16b c CH 10 [11^{b}27 33] 17a / *Physics* BK VII CH 3 [246^{b}3 248 8] 329c 330d

4b The contrariety of qualit es with or with out intermediate degrees

7 PLATO *Phaedo* 226d 227b 243c 244b

8 A ISTOTLE *Categories* CH 5 [4 10–^{b}19] 8b 9a CH 8 [10^{b}11 5] 15d CH 10 [12 9–25] 17b c / *Pl ysics* BK IV CH 9 [217 34 ^{b}11] 297b / *Gener at on and Corrupt on* BK II CH 1 3 428b d 431a / *Metaphysics* BK 1 CH 5 [986 22 ^{b}4] 504b c BK V CH 10 [1018^{a}22 31] 539a b K XIV CH 1 [1087^{a}28–^{b}4] 619b

9 ARISTOTLE *Ethics* BK V CH 1 [1129 1 35] 376a d K VIII CH 8 [1159^{b}19–23] 411d

10 HIPPOCRATES *Ancient Medic ne* par 13 19 4c 7b p r 24 8d 9a c

10 GALEN *N tural Faculti s* BK I CH 2 167b-168b BK II CH 8–9 191b 199a c pa s m

12 LUCRETIUS *N ture of Things* BK II [51–521] 21c

17 PLOTINUS *Sixth Ennead* TR III CH 19 20 291d 293a

22 CHAUC R *Troilus and Cressida* BK I T NZA 91-92 13a

48 MELVILLE *Moby Dick* 39b-40a

53 JA IES *Psychology* 327a 328b 363b-364a 387b 458a-459b

4c The similarity of things with respect to quality likeness and unlikeness in quality

7 PLATO *Parme ides* 493d-494a

8 ARISTOTLE *Catego ies* CH 6 [6^{a}7–35] 10d 11 CH 8 [11 15 19] 16b / *Generat n nd Cor r ption* BK II CH 6 [333^{a}27 34] 434a / *M ta phy ics* BK V CH 9 [1018 15 19] 538d 539a CH 15 [021 8–14] 542b c BK X CH 3 [054^{b}3 13] 581b

9 ARISTOTL *History of A m ls* BK I CI 1 [486 15 487^{a}1] 7b-d BK VIII CH 1 [588 18 ^{b}4] 114b d

11 EUCLID *Elements* BK VI DEFINITIONS 1 99a

17 I LOTINUS *First E ead* TR II CH 2 7b / *Fou th En d* TR IX C 1 4 206c d / *S xth Ennead* TR III CH 15 289a-c

19 AQU s *Summa Theologica* P RT I Q 4 A 3 ANS 22b-23b PART I II Q 27 A 3 738c 739 Q 28 A 1 REP 2 740b 741a

20 AQ I s *S mma Theol g a* PART III SUP L, Q 69 A 1 REP 2 885c 886c Q 92 A 1 ANS 1025c 1032b

31 S INOZA *Eh cs* PART III PROP 57 SCHOL 415b

42 KANT *Pu e R so* 73c 74a / *Judgement* 602b 603a esp 602b d [fn 1]

53 J MES *Psych l gy* 319b 322a 344b 348a esp 346a 348a 378b 379a

5 Change of quality the analysis of alteration

7 PLATO *Phaedo* 26d 227b / *Parmenides* 509b 510a / *Theaetetus* 533a 534a

8 ARISTOTLE *Categories* CH 5 [4 10–^{b}19] 8b 9a CH 14 [15 14 32] 20d 21a / *To ics* BK VI CH 6 [145^{a}2 13] 198c d / *Physics* BK I CH 7 [190^b 9] 266b BK V CH 2 [226^{a}26–29] 306d [6^b 9] 307a BK VI CH 10 [241^{a}6–32] 325b c BK VII CH 2 [244^{b}1–245 12] 328b d CH 3 329a 330d BK VIII CH 7 [260^{a}6–^{b}14] 346b-c / *Heavens* BK I CH 3 [270^{a}26–36] 361c CH 1 [283^{b}17–23] 375c d / *Generation and Corruption* BK I CH 1 409a-410c CH 4 416c-41 a / *Metaphysics* BK I CH 8 [989^{a}18– 9] 50 b c BK V CH 21 544a b BK XI CH 1 [1068^{b}15 19] 597c / *Soul* BK II CH 5 [417^{a}21 418^{a}6] 647d 648d / *Sense and the Sensible* CH 6 [446^{b}2 447^{a}9] 685b c / *Dreams* CH 2 [459^{a}3 ^{b}] 703a b

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10 GALEN *Natural Faculties* BK I CH 2 167b-168b CH 5 169b c CH 8 171a CH 12 173a 173c BK III CH 7 203c 204c

12 LUCRETIUS *Nature of Th gs* BK I [03 -9-] 8d 12b BK II [730–787] 24b 25a BK V [3 415] 64a 66c

17 PLOTINUS *Third Ennead* TR VI CH 8-10 111c 113a

19 AQUINAS *Summa Theologica* PART I Q 48 A 4 ANS and REP 3 262a 263a

20 AQUINAS *Summa Theologica* PART I-II Q 50 A 1 REP 3 6a 7b Q 52 A 1 ANS and REP 3 15d 18a PART III SUPPL, Q 82 A 3 ANS and REP 2 971a 972d Q 91 A 1 REP 2,4 1016b-1017c

23 HOBBES *Leviathan* PART III 172b

30 BACON *Novum Organum* BK I APH 50 111b APH 66 114d 115 BK II APH 7 139c 140a

34 NE TON *Optics* BK III 541b

35 LOCKE *Human Understand n* BK II CH XXI SECT 1 2 178b c CH XXII SECT 11 203c d CH XXVI SECT 1– 217a d

35 BERKEL Y *H man Knowledge* SECT 25 33 417d-419a passim esp SECT 6 418a

45 LAVOISIER *Element of Chemistry* P T I 87c d 103b c 105d

45 FOURIER *Theory of Heat* 169b

53 JA IES *Psychology* 68a b 104a 105a

6 Qual ties as objects of knowledge

6a Qual ty in relat on to definition or ab trac tion

8 ARISTOTLE *Topics* BK I CH 9 [103^{b}2 3] CH 2 147a BK I CH 1 [121^{a}6–9] 168d 169a CH 2 [122^{b}12 18] 170d 171a C 6 [128^{a}20–29] 17 d 178a BK VI CH 6 196d 199c / *Metaph sics* BK V CH 14 [1020^{a}34 ^{b}9] 541c d [020^{b}13 1] 541d BK XI CH 6 [1063^{a}22 8] 591c

17 PLOTINUS *S cond Ennead* TR VI CH I 60c 61 / *Sixth Enn ad* TR I CH 10-1 257b-259d TR II CI 10-19 289c 292b

19 AQUINAS *S mma Theolog ca* P RT I II Q 3) A 4 ANS 774d 775d

23 HOBB S *Levia han* PART I 72a d PART IV 272b

35 LO KE *Human Understanding* BK II CH XI CT 9 145b c CH XII S I 147b c BF III CH IV SECT 4 II 260b 262b passim esp SECT 7 260d SECT 16 263b-c

35 B RKELEY *Human Knowledge* SECT 6-19 414b-416d passim, esp SECT 7 0 414b-415a SECT 99 432b

35 HUME *Human U derstanding* S CT X DIV 12 505c d

42 K NT *Pure Reason* 73c 74a

53 JAM S *Psych logy* 185a b 305a 308b esp 308a b 329a 331b esp 331a b 503a b 668a 673a

6b The pe cept on of qualit es

7 PLATO *M* 177b c / *T m us* 462b 466a / *Th etet s* 519d 520b 521d 522a 533b-d / *Seve th Le ter* 810a b

8 A IS TLE *C tegories* CH 7 [7^b35-8 2] 12d 13a / *Physic* BK V CH 2 [244^b 0- 45 3] 328 d / *Soul* BK I CH 5-BK CH 647b-659 BK III CH 4 [429 10-^{b}4] 661b d CH 8 664b d / *Sense and the Sen ible* 673a 689 c / *D eams* c 2 [459^a23 460 32] 703a 704b

12 LUCRETIUS *Nat f Th ngs* BK I [298 3 4] 4d F IV [26- 68] 44b 47d [478-499] 50b d [52 72] 51a 53d BK VI [9 1-935] 92 d

19 AQUINAS *Summa Theol g* PART Q 14 A I AN 75d 76c A 2 AN 76d 77d Q 78 A 3 410a 411d

20 AQU NAS *S ma Theol gica* PART III SUPPL Q 8 AA 3 4 971a 974c

22 C IAUC *T ilus and Cressida* BK I STANZA 91-9 13a

23 H BES *Lev than* ART I 49b-d PART I 172b

31 D CART S *Rul s* XII 18d 19 / *Med tat ons* VI 100a d / *Obj ction a d Repl* 162d 165d esp 164d 165 211a b 229d 230

34 NEWTON *Optics* BK 428a b BK 519a b

35 LOCK *Human Understa d ng* NTRO ECT 2 93b-d BK II CH II S T I 127d I 8 CH VIII S CT 4 133d SECT II 21 134d 136d passim H IX ECT I 138b-140b pass m CH XX I S CT I 13 206d 208b BK CH VI S CT 9 270d 271 BK IV H II CT 9-13 311b 312b

42 KANT *Pu e Re n* 15b 23 24 29d 33d esp 30d 31a 31d 32a 32d 33b [fn] 212 -c

48 M LV LL *M by D ck* 39b 40 144b 145a

53 JAMES *Psych l gy* 98b 105a passim esp 104 105a 184b 327a 341a esp 3?7a b 3 9a 331b 363b 452a-471 esp 452a-456a 459 b 469a 471a 479a 502a 505b c p 505b 520 521 5 6b 527 540a 635a esp 541a 548b 549a 552a 564a 589b 595a 606b 608b 627a 628b

54 FREUD *I terp etat on f Dreams* 352d 367b c 384c 385c

6c The objectivity of sense qualit es the com parati e objectivity of primary and ec ondary qual t es

7 P ATO *T mae s* 462b-466a / *Theaet tus* 517b 520b 521d 522a 533b d

8 A STOTLE *Generation a d Corruption* K I CH 2 [3 5^b33-316 3] 411c / *M t phys s* BK IV CH 5 [1010^b30-1 II 2] 530c / *Soul* BK III CH 2 [426^a20-.6] 658c / *Sense a d the Sens ble* CH 6 [445^b4 446^a-0] 683b 684c

9 ARISTO E *Parts f Animals* BK II CH 2 [648^b 15 17] 173a

10 GALEN *Natural Faculties* K I CH 167d

12 LU RETIUS *Nature of Things* K II [730-864] 24b 26a [I 102] 27d 28a

23 HO *Leviath* PART I 49b-d 57b 59d 62b PART III 172b PART IV 258b c 262a b

31 DESCARTES *R iles* XII 19a c / *Med tations* V 100 d / *Object ons and Repl es* 162d 165d 211a b 228c 229c 229d 230a 231 b

34 NEWTON *Pri ple* K III RULE III 270b-271a / *Optics* BK I 428a b

35 LOCKE *Hum Underst d ng* BK I CH VIII S CT 7 26 134b 138b CH XXI S CT 3 178d CH XXIII S T 7- 3 205d 208b esp S CT 9 206b c SECT 37 214a b C I XXX S CT 2 238b-c CH XXXI S CT 2 239b d H XXXII S T 14 16 245c 246b K IV CH II CT II 14 311c 312d CH I ECT 6 314b EC 28 322 c CH IV S C 4 324c CH XI ECT 4-9 355b 357a

35 B RKEL Y *Human K owledg* S CT 1-91 413a-431a esp SECT 3 413c d SECT 9-15 414d 416a S T 48 49 422a b SECT 56-57 423 424a S CT 73 427b-c S CT 76-78 427d 428b SE T 86-91 429c-431a

35 HUM E *Huma Under tand ng* SECT X D V I 7 3 504a 506a

42 KANT *Pu Re on* 15b- 23a 24 29d 33d esp 30d 31a 31d 32a 32d 33b [fn] 69c 72 / *I tro Met physi of Morals* 385 -c

50 MARX *Cap t l* 31 d

53 JAM *Psy h logy* 127b 128a 150 151a 176a 177a 457a 479 esp 457 -459b 469a b 471b-474a 479a 650b 651a 851b 852a 860b

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Discussions relevant to the conception of the categories as transcendental concepts of the understanding *see* FORM 1c JUDGMENT 8c–8d MEMORY AND IMAGINATION 6c(2) MIND 1e(1) PRINCIPLE 2b(3)

The consideration of such non sensible qualities as habits dispositions and powers, *see* BEING 7c(2) HABIT 1 LIFE AND DEATH 2 MAN 4d NATURE 1a(1) SOUL 2a 2c

The distinction between proper and common sensibles and the related distinction between primary and secondary qualities *see* SENSE 3c(2)–3c(4)

Other discussions of the relation of quantity to quality *see* MECHANICS 4b QUANTITY 1a and for the problem of the variation of qualities in degree or intensity *see* SAME AND OTHER 3c SENSE 3c(2)

The contrariety and correlation of qualities *see* OPPOSITION 1a–1b

The conception of similarity as likeness in quality *see* SAME AND OTHER 3c

The distinction of alteration or change in quality from other kinds of change *see* CHANGE 6 9

The general theory of sensitive knowledge and its bearing on the objectivity of sensible qualities *see* KNOWLEDGE 6b(1) SENSE 4–4c

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World* but relevant to the idea and topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collection
II Works by authors not represented in this collection

For the date place and other facts concerning the publication of the works cited consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*

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Chapter 76 QUANTITY

INTRODUCTION

As indicated in the chapter on Quality the traditional consideration of that fundamental notion involves questions concerning the relation of quality and quantity and the priority of one or the other in the nature of things According to one theory of the elements difference in quality rather than in quantity seems to be the defining characteristic Certain kinds of qualities it is thought inhere in substances directly and without being based upon their quantitative aspects But it is seldom if ever suggested that quality takes universal precedence over quantity

In the tradition of western thought the opposite view—that quantities are primary—seems to occur with some frequency at least so far as the realm of material things is concerned It is held that bodies have only quantitative attributes Such sensible qualities as colors odors tastes textures are thought to have no reality apart from experience or as it is sometimes put red and blue hot and cold sweet and sour are the qualities of sensations not of things

Those who think that bodies can exist without being perceived also tend to think that bodies can exist totally bereft of qualities but never without the d mens ons of quantity The notions of matter and quantity seem to be inseparably associated For matter to exist without existing in some quantity seems to be as inconceivable as for experience to exist without qualitative dive sity As if there could be matter says Hobbes that had not some determined quantity when qu ntity is nothing else but determinat on of matter that is to say of body by wh ch we say that one body is greater or less than another by thus or thus much

The use of the word quality where quantity appears to be meant only slightly obscures this point Newton refers to extension hardness impenetrability mobility and inertia as the qualities of bodies which are to be esteemed the universal qualities of all bodies whatsoever Following him Locke calls our simple ideas of solidity extension figure motion or rest and number ideas of the original or primary qualities of bodies and says that even if bodies are divided till their parts become insensible they must retain still each of them all those qualities For division can never take away either solidity extension figure or mobility from any body but only makes two or more distinct separate masses of matter of that which was one before

Though Locke uses the word quality for those attributes which belong to bodies even when they are not sensed or are not even sensible he also appears to recognize that number extens on and figure are as the tradit onal objects of the mathematical sciences traditionally regarded as quantities rather than qualities It has been generally taken for granted he writes that mathematics alone are capable of demonstrative certainty but to have such an agreement or disagreement as may intuitively be perceived being as I imagine not the privilege of the ideas of number extension and figure alone it may possibly be the want of due method and application in us that demonstration has been thought to have so little to do in other parts of knowledge Yet he adds in other simple ideas whose modes and d fferences are made and counted by degrees and not quantity we have not so n ce and accurate a d stinction of their differences as to perceive or find ways to measure their just equality

Newton also gives some indication that his universal qualit are quantit es H estricts them to ttributes wh cl dm t ne ther intensification no rem on of degrees One dif-

ference between quantity and quality according to an ancient opinion is that qualities are subject to variation in degree quantities not One thing may be white or hot to a greater or less degree than another Aristotle observes but one thing cannot be two cubits long in a greater degree than another Similarly with regard to number what is three is not more truly three than what is five is five Nor is there any other kind of quantity of all that have been mentioned with regard to which variation in degree can be predicated

GRANTED THAT WHAT Newton and Locke call qualities are not qualities except in the sense in which the word quality means attribute difficult questions remain concerning their enumeration of the *universal* or *primary* attributes of bodies Do extension hardness impenetrability motion and rest figure and number constitute an exhaustive enumeration? Are these *all* the corporeal quantities or only the basic ones from which others can be derived? Are they all of the same kind and among them are some more fundamental than others?

Descartes for example seems to make extension the one primary attribute of bodies I observed he writes that nothing at all belonged to the nature or essence of bodies except that it was a thing with length breadth and depth admitting of various shapes and various motions I found also that its shape and motions were only modes which no power could make to exist apart from it Finally I saw that gravity hardness the power of heating of attracting and of purging and all other qualities which we experience in bodies consisted solely in motion or its absence and in the configuration and situation of their parts

With motion and figure modes of extension and all the other properties of bodies the result of their motions or configurations the three dimensions of extension (or spatial magnitude) become almost identical with body itself Considering the statement *body possesses extension* Descartes points out that though the meaning of *extension* is not identical with that of *body* yet we do not construct two distinct ideas in our imagination one of body the other of extension but merely a single image of extended body and from the point of view of the thing it is exactly as if I had said *body is extended* or better *the extended is extended*

But Descartes adds when we consider the expression *extension is not body* the meaning of the term *extension* becomes otherwise than as above When we give it this meaning there is no special idea corresponding to it in the imagination It becomes a purely abstract entity which may properly be the object of the geometer s consideration but then it should be treated as an abstraction and not as if it had independent reality

Aquinas also distinguishes between physical and mathematical quantities or the quantities which inhere in bodies and the quantities abstracted therefrom Quantities such as number dimension and figure which are the terminations of quantity can be considered apart from sensible qualities and this is to abstract them from sensible matter But they cannot be considered without understanding the substance which is subject to quantity —that is, corporeal or material substance. Like a body a mathematical solid has three dimensions but as Aquinas points out lacking matter this three-dimensional object does not occupy space or fill a place The three spatial dimensions are not for him however the only primary quantities of either the physical or the mathematical body Number and figure are as fundamental

Still another enumeration of corporeal quantities is given by Lucretius in his description of the properties of atoms According to him atoms vary in size weight and shape Each of these attributes is a distinct quantity not reducible to the others In addition atoms have the property which Newton calls impenetrability and Locke solidity But whereas atoms may be unequal in size and weight and different in shape or configuration they are all equal in their solidity being absolutely indivisible through lack of void or pores

THE DISTINCTION BETWEEN mathematical and physical quantity and the enumeration or ordering of diverse quantities seem to require the consideration of two prior questions. What is the nature of quantity? What are the kinds or modes of quantity?

Terms like quantity and quality do not appear to be susceptible of definition Quantity is,

perhaps *the* fundamental notion in the mathematical sciences yet neither it nor such terms as magnitude figure, and number are defined in the great books of geometry or arithmetic In Aristotle s theory of the categories as the highest genera such terms as substance quantity quality and relation are strictly indefinable if to define a term is to give its genus and differentia

With quite a different theory of the categories Kant also treats them as indefinable As indicated in the chapter on QUALITY they are for him the transcendental concepts of the understanding He uses such terms as quantity quality and relation with modality as a coordinate fourth to represent the four major groupings of the categories In his table of the categories Kant s treatment of quantity under which he lists the concepts of unity, plurality and totality parallels the treatment of quantity in his table of judgments according to which judgments are classified as universal particular and singular All these considerations of quantity belong to what Kant calls his transcendental logic So far as Kant considers quantity in its mathematical or physical (rather than logical) significance he discusses it in connection with the transcendental forms of space and time which provide according to him the *a priori* foundations of geometry and arithmetic—the sciences of magnitude and number But in none of these connections are quantity and its principal modes magnitude and number defined

Though indefinable quantity can according to Aristotle be characterized by certain distinctive marks As we have already observed where qualities admit of variation in degree quantities do not With few exceptions each quality has a contrary whereas definite quantities such as an extent or a number are not opposed by contrary quantities Aristotle considers the possibility that such apparently quantitative terms as large and small may also appear to be contrary to one another as hot is to cold or white is to black. But he argues these terms represent quantities only relatively not absolutely When things are compared with respect to size one may be judged to be both larger and small r than others but the sizes of each of two things unequal in size are not contrary to one anoth r

These two characteristics (lack of contrariety and of variation in degree) do not however satisfy Aristotle s search for a distinctive mark of quantity They apply to substances such as tree or man as well as to figures and numbers. This fact could have some bearing on the issue whether the objects of mathematics have a separate existence comparable to that of substances but in Aristotle s view at least quantities are not substances Physical quantities are the attributes of bodies the objects of mathematics consist of quantities abstracted from sensible matter

Conceiving quantity as one of the attributes of substance Aristotle says that the most distinctive mark of quantity is equality and inequality Only when things are compared quantitatively can they be said to be equal or unequal and conversely in whatever respect things are said to be equal or unequal in that respect they are determined in quantity

How far is it true Plotinus asks that equality and inequality are characteristic of quantity? It is significant he thinks that triangles and other figures are said to be similar as well as equal. It may of course be the case that the term similarity has a different sense here from that understood in reference to quality or another alternative, Plotinus adds may be that similarity is predicable of quantity only insofar as quantity possesses [qualitative] differences In any case comparison whether in terms of equality or likeness seems to generate the relationships fundamental to the mathematical treatment of quantities

Eucl d does not define magnitude in itself but only the relation of magnitudes to one another The first four defin tions in the fifth book of his *Elements* illustrate this 1 A magnitude is a *part* of a magnitude the less of the greater when it measures the greater 2 The greater is a *multiple* of the less when it is meas ur d by the less. 3 A *rat o* is a sort of relation in respect of size between two magnitudes of the same kind 4 Magnitudes are said to *have a rat o* to one another which are capable when multiplied of exceeding one another

Archimedes also states his understand ng of the distinction between kinds of magnitudes—without defining these kinds—by ef r nce to their comparability Assuming that any given

magnitude can by being multiplied exceed any other magnitude of the same kind he is able to know that magnitudes are of the same kind if by being multiplied they can exceed one another It follows that an indivisible point and a finite or divisible magnitude such as a line are not of the same kind for they cannot have a ratio to one another For the same reason the length of a line the area of a plane and the volume of a solid are not magnitudes of the same kind Since they bear no ratio to one another they are quantitatively incomparable

THE EMPHASIS UPON ratios has some significance for a controversial point in the definition of the subject matter of mathematics In the tradition of the great books mathematicians and philosophers seem to agree that arithmetic and geometry have as their objects the two principal species of quantity—number and magnitude This is the opinion of Euclid Nicomachus Descartes and Galileo it is the opinion of Plato Aristotle Aquinas Bacon Hume and Kant But writers like Russell and Whitehead who reflect developments in mathematics since the 19th century reject the traditional opinion as unduly narrowing the scope of mathematics

To give adequate expression to the universality of mathematics they sometimes propose that it should be conceived as the science not merely of quantity but of relations and order In view of the fact that the great books of mathematics deal with quantities largely in terms of their relationship or order to one another the broader conception seems to fit the older tradition as well as more recent developments Whether there is a genuine issue here concerning the definition of mathematical subject matter may depend therefore on whether the fundamental terms which generate the systems of relationship and order are or are not essentially quantitative To this question the traditional answer seems to be that the mathematician studies not relations of any sort but the relation of quantities

The problem of the kinds of quantity seems to appeal for solution to the principle of commensurability For example Galileo s observation that finite and infinite quantities cannot be compared in any way implies their utter diversity But he goes further and says that the attributes larger smaller and equal have no place either in comparing infinite quantities with each other or in comparing infinite with finite quantities. If the notion of quantity entails the possibility of equality or inequality between two quantities *of the same kind* then either infinite quantities are not quantities or each infinite quantity belongs to a kind of its own

The principle of incommensurability seems to be applied by mathematicians to distinguish quantities which are different species of the same generic kind For example the one-dimensional two-dimensional and three-dimensional quantities of a line a plane and a solid, are incommensurable *magnitudes* The number of days in a year and the number of years in infinite or endless time are incommensurable *multitudes*

The distinction between magnitude and multitude (or number) as two modes of quantity appears to be based upon another principle, that of continuity and discontinuity Yet the question can be raised whether magnitudes are commensurable with numbers, at least to the extent of being measured by numbers. It may be necessary however to postpone answering it until we have examined the fundamental difference between magnitude and multitude as generic kinds of quantity

What if magnitude and multitude or continuous and discontinuous quantity do not divide quantity into its ultimate kinds? Aquinas, for example proposes that the two basic kinds are dimensive and virtual quantity There is quantity of *bulk* or dimensive quantity he writes which is to be found only in corporeal things and has therefore no place in God. There is also quantity of *virtue* which is measured according to the perfection of some nature or form It is in the latter sense according to Aquinas that Augustine writes In things which are great but not in bulk, to be greater is to be better

Just as dimensive quantities can be incommensurable with one another so with respect to virtual quantities God s infinite perfection makes him incommensurable with finite creatures. But a dimensive quantity cannot be either commensurable or incommensurable with

a virtual quantity The standard of measure ment by which dimensive quantities are com pared and the standard by which virtual quan tities are ordered represent utterly diverse principles of commensurability Euclid s state ment that those magnitudes are said to be commensurable which are measured by the same measure and those incommensurable which cannot have a common measure cannot be extended to cover dimensive and virtual quantities for the very meaning of measure changes when we turn from the dimensions of a body to the perfections of a being

The distinction which Aquinas makes be- tween dimensive and virtual magnitudes has its parallel in the distinction he makes between two kinds of number for both depend on the difference between *material* and *formal* quan tity Division is twofold he writes One is material and is division of the continuous from this results number which is a species of quan tity Number in this sense is found only in ma terial things which have quantity The other kind of division is formal and is effected by op posite or diverse forms and this kind of divi sion results in a multitude which does not be long t) a genus but is transcendental in the sense in which being is divided by one and many Only this kind of multitude is found in immaterial things According to the example suggested in the context such is the multitude which is the number of persons in the Trinity

THE MATERIAL quantities of physics and math ematics seem to fall under the two main heads of magnitude and multitude Quantity is ei ther discrete or continuous writes Aristotle Instances of discrete quantities are number and speech of continuous lines surfaces solid and besides these time and place Nicomachus explains the two kinds of quantity by examples The unified and continuous he says is exem pl fied by an animal the un verse a tree and the like which are properly and peculiarly called magnitudes to illustrate the discon tinuous he points to heaps of things which are called multitudes a flock for instance a people a chorus and the like

The principle of this d stinction appears to be the possession or lack of a common bound ary To take Aristotle s example of speech as a quantity the letters of a written word or the syllables of vocal utterance comprise a multi tude rather than a continuum or magnitude because there is no common boundary at which the syllables join each being separate and distinct from the rest The continuity of magnitudes can be readily seen according to Aristotle in the possibility of finding a common boundary at which the parts of a line join or make contact In the case of a line he says this common boundary is the point in the case of a plane it is the line Similarly you can find a common boundary in the case of the parts of a solid namely either a line or a plane

Accepting the principle of the distinction Plotinus insists that number and magnitude are to be regarded as the only true quantities All others like space and time or motion are quantities only in a relative sense that is inso far as they can be measured by number or in volve magnitude Galileo raises another sort of difficulty The Aristotelian conception of mag nitudes as continuous quantities implies their infinite divisibility This means in his terms that every magnitude is divisible into magni tudes and that it is impossible for anyth ng continuous to be composed of indivisible parts Galileo acknowledges the objections to build ing up continuous quantit es out of indivisible quantities on the ground that the addition of one indivisible to another cannot produce a divisible for if this were so it vould render the indivisible divisible Suppose a line to com prise an odd number of indivisible points Since such a line can in principle be cut into two equal parts we are required to do the impos sible namely to cut the indivisible which l es exactly in the middle of the l ne

To this and other objections which seem to him of the same type Galileo replies that a divisible magnitude cannot be constructed out of two or ten or a hundred or a thousand indi visibles, but requires an infinite number of them I am willing he says to grant to the Peripatetics the truth of their opinion that a continuous quantity is divisible only into parts which are still further d visible so that however far the d vision and subdiv on be continued no end will be eached but I am not so certain th t th y w ll conced to me that none of these di s ons of theirs can be a final

one as is surely the fact because there always remains another the final and ultimate division is rather one which resolves a continuous quantity into an infinite number of indivisible quantities

The question remains whether these indivisible units an infinite number of which constitute the continuity of a finite magnitude can properly be called quantities At least they are not magnitudes as is indicated by Euclid s definition of a point as that which has no part or by Nicomachus statement that the point is the beginning of dimension but is not itself a dimension If in addition to having position a point had size or extent a finite line could not contain an infinite number of points This problem of infinite and infinitesimal quantities is more fully discussed in the chapter on INFINITY

WITHIN EACH OF THE two main divisions of quantity—magnitude and number—further sub-divisions into kinds are made Relations of equality and inequality or proportions of these ratios may occur between quantities different in kind—different plane figures for example But the great books of mathematics indicate other problems in the study of quantity than those concerned with the ratios and proportions of quantities The classification of lines and figures results in the discovery of the properties which belong to each type Possessing the same properties all lines or figures of a certain type are similar in kind not equal in quantity In addition to developing the properties of such straight lines as perpendiculars and parallels or such curved lines as circles and ellipses parabolas and hyperbolas the geometer defines the different types of relationship in which straight lines can stand to curves *e g* tangents secants asymptotes

As there are types of lines and figures both plane and solid so there are types of numbers Euclid and Nicomachus divide the odd numbers into the prime and the composite—into those which are divisible only by themselves and unity such as 5 and 7 and those which have other factors such as 9 and 15 The composite are further differentiated into the variety which is simply secondary and composite and the variety which in itself is secondary and composite but relatively is prime and incomposite To illustrate the latter Nicomachus asks us to compare 9 with 25 Each in itself, he writes is secondary and composite but relatively to each other they have only unity as a common measure and no factors in them have the same denominator for the third part in the former does not exist in the latter nor is the fifth part in the latter found in the former

The even numbers are divided by Nicomachus into the even times even (numbers like 64 which can be divided into equal halves and their halves can again be divided into equal halves and so on until division must stop) the even times odd (numbers like 6 10 14 18 which can be divided into equal halves but whose halves cannot be divided again into equal halves) and the odd times even (numbers like 24 28 40 which can be divided into equal parts whose parts also can be so divided and perhaps again these parts but which cannot be divided in this way as far as unity) By another principle of classification the even numbers fall into the superabundant the deficient and the perfect The factors which produce superabundant or deficient numbers when added together amount to more or less than the number itself but a number is perfect Nicomachus writes when comparing with itself the sum and combination of all the factors whose presence it will admit it neither exceeds them in multitude nor is exceeded by them It is equal to its own parts as for example 6 for 6 has the factors half third and sixth 3 2 and 1 respectively and these added together make 6 and are equal to the original number At the time of Nicomachus only four perfect numbers were known—6 28 496 8128 since his day seven more have been discovered

The further classification of numbers as linear plane and solid and of plane numbers as triangular square pentagonal etc assigns properties to them according to their configurations The analysis of figurate numbers by Nicomachus or Pascal represents one of the great bridges between arithmetic and geometry of which the other in the opposite direction is the algebraic rendering of geometrical loci in Descartes analytical geometry

In either direction of the translation between arithmetic and geometry discontinuous and continuous quantities seem to have certain

properties in common at least by analogy Euclid for example proposes numerical ratios as the test for the commensurability of magnitudes Commensurable magnitudes have to one another he writes the ratio which a number has to a number With the exception of infinite numbers all numbers are commensurable and so provide the criterion for determining whether two magnitudes are or are not commensurable

Introducing the notion of dimensionality into the discussion of figurate numbers Nicomachus observes that mathematical speculations are always to be interlocked and to be explained one by means of another Though the dimensions by which linear plane and solid numbers are to be distinguished are more closely related to magnitude yet the germs of these ideas are taken over into arithmetic as the science which is the mother of geometry and more elementary than it The translation does not seem to fail in any respect The only non dimensional number unity finds its geometrical analogue in the point which has position without magnitude

When diverse magnitudes are translated into numbers the diversity of the magnitudes seems to be effaced by the fact that their numerical measures do not have a corresponding diversity The numbers will appear to be commensurable though the magnitudes they measure are not as magnitudes comparable As Descartes points out it is necessary therefore to regard each order of magnitude as a distinct dimension

By dimension Descartes writes I understand nothing but the mode and aspect according to which a subject is considered to be measurable Thus it is not merely the case that length breadth and depth are dimensions but weight also is a dimension in terms of which the heaviness of objects is estimated So too speed is a dimension of motion and there are an infinite number of similar instances For that very division of the whole into a number of parts of identical nature whether it exist in the real order of things or be merely the work of the understanding gives us exactly that dimension in terms of which we apply number to objects

The theory of dimensions can be illustrated by the choice of clocks rules and balances as the fundamental instruments for the measurement of physical quantities They represent the three dimensions in the fundamental equations of mechanics—time distance and mass

Additional dimensions may be introduced in electricity or thermodynamics In developing the theory of heat Fourier for example enumerates five quantities which in order to be numerically expressed require five different kinds of units namely the unit of length the unit of time that of temperature that of weight and finally the unit which serves to measure quantities of heat To which he adds the remark that every undetermined magnitude or constant has one *dimension* proper to itself and that the terms of one and the same equation could not be compared if they had not the same *exponent of dimension*

A fuller discussion of the basic physical quantities their definition measurement and their relation to one another belongs to the chapter on MECHANICS The consideration of time and space as quantities or physical dimensions occurs in the chapters devoted to those subjects

OUTLINE OF TOPICS

REFERENCES

To find the passages c ted use the n mbers in heavy type which are the volume nd page numbers of the passa es r f rred to For e ample in **4** HOMER *Iliad* BK II [265 83] **12d** the number **4** is the number of the volume in the set the number **12d** ind cates that the pas sa e is in section d of p ge 12

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lower halves of the p ge For exa nple in **53** JAMES *Psy h logy* **116a**-**119b** the pa sage beg ns in th upper half of page 116 and ends in the low r half of page 119 When the text is printed in two col mns the l tters a and b refer to the upper and lower halves of the left hand s de of the page, the letters c and d to the upper and lower halves f the r ght hand side of the pa e For example in **7** PLATO *Sympo ium* **163b**-**164c** the passage beg ns in th lower half of the left hand side of page 163 and ends in the upper half f the right hand side of page 164

AUTHOR DIVIS ON One or m re of the main divis ons of a work (such s PART BK CH SE T) are sometimes included in the reference l ne numbers in bracket are g ven in cer tain cases *e g Il ad* K II [265 83] **12d**

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SYM OLS The abb sation esp calls the reader s attent n to one o more especially relevant part of a whole r f en e pass m sig ufies that the topic is discussed intermit t ntly rath r than ntinuo sly in the work or pa sage cit d

F r dd t onal nfo mation concerning the tyle of the references see the Expl nation of Refe en Style for g neral gu dance in the use of *The Great Ideas* co sult the Prefa e

The n tu e and existence of quant ty its rel tion to matt substance and body the transcendent l catego es of qu nt ty

7 PL TO *Theaetetus* **518b**-**519b** / *S phist* **566d** / *Phileb s* **616a**

8 ARISTOTL *Categor s* CH 5 [3^{b}24 4 9] **8a**-**b** CH 6 **9a**-**11a** / *P ter r Analyt cs* BK CH 13 [79^{a}6-1] **108c** CH 8 [81 40–^{b}6] **111b** / *T p* K I CH 9 **147** b / *Phy ics* BK CH 2 [185^{a}20–^{b}4] **260a**-**b** CH 4 [187^{b}14 22] **262d** BK I H 2 [193^{b} - 94 11] **270a** K IV CH I [2 8^{b}19–24] **287b-c** H 2 **288b**-**289** / *Metaphysics* BK I 15 [985 -986^{a}2] **503d**-**504b** CH 6 [987^{b}10–34] **505**-**506a** CH 8 [989^{b}29-990^{a}32] **508** 9 [99 ^{b}9–992^{b} 7] **509d**-**511a** K I CH 1 [995^{b} 3 18] **514a** [996 13-15] **514** H [997^{b} -998 9] **516b**-**d** H 5 **520c**-**521b** BK V CH 13 **541b** K V CH O [35^{b}3 36^{a}] **559b-c** CH [036^{b}32-03 4] **560b-c** K VII C 1 3 [043^{b}34 44 14] **568b**-**d** BK X CH 1 [45^{b}28 3] **570b** BK X CH 2 [60 36–^{b} 9] **588** d CH 3 [6 29–^{b}4] **589c** BK XII H 1 [69 8–25] **598a** C 1 5 [1071^{a}23 ^{b}1] **600d**-**601a** BK XIII 1 3 **607a**-**610a** H 6–9 **611d**-**618** K XI **619b**-**d** **626d** / *Soul* BK CH 4 [4 8^{b}31]–CH 5 [4 9^{b}18] **638d**-**639c** BK I H 7 [43 ^{b}13 9] **664b**

11 N COMA HU *Ar thmetic* K I **811b**-**812a**

17 P OTINUS *Seco d E n d* TR V CH 9 **53** b CH 1– **53d**-**55b** / *Third Enn d* TR VI CH 16–18 **116c**-**118** / *Fourth E nead* TR V I H 8 **196a**-**b** / *F fth Ennead* TR I CH 4 **210b**- / *Sixth Enn ad* TR I CH 4–5 **253b**-**254d** TR II CH 13 **276a**-**c** TR I CH 15 **286d**-**289c** TR VI **310d**-**321b** esp c 3–7 **311c**-**314** CH 3 18 **316d**-**321b**

19 AQU NAS *Summa The logica* PART I Q 3 A 2 CONTRARY **15c**-**16a** Q 5 A 3 REP 4 **25a**-**d** Q 7 A I RE 2 **31a**-**d** Q 8 A 2 R 3 **35** **36b** Q O A 6 ANS **45** -**46d** Q II A R I **46d**-**47d** A 3 REP 2 **49a-c** Q 44 A REP 3 **238b**-**239a** Q 85 A RE **451** **453**

20 AQU N *S mma The l g ca* ART I II Q 52 A I ANS **15d**-**18a** PART SUP Q 79 A I REP 3 **951b**-**953b** Q 80 A 5 REP 3 **963a**-**964b** Q 83 A AN **976** **978c** A 3 REP **978** **980d**

23 HO B S *Le than* ART II **172b** PART V **269d**-**270a** **271d**-**272**

31 D CAR S *Rul* XII **18d**-**19c** X V **29b**-**30b** / *Obj ct o s a d Replies* **154** **231** b

31 S I O A *Ethi s* RT OP 15 C OL **360b**-**361d** PA T RO 2 **374a**

35 LOCK *H m U derst d g* K CH VIII CT 9– 6 **134**-**138b** pass m esp S CT 9 **134** XX I S CT 9 **206b** XXXI S CT 2

1 The nature and existence of quantity its rela t on to matter substance and body the transcendental categories of quantity)

35 BERKELEY Human Knowledge SECT 9 15 414d-416a SECT 73 427b c
42 KANT Pure Reason 15b c 41c 45b esp 43d 44a 69c 72c 74b-76c 137a 140a c 161d 163a 211c 213a
53 JAMES Psychology 551a 874a 878a esp 875a 876b 878a

1a The relation between quantity and quality reducibility of quality to quantity

7 PLATO Meno 176d 177a / Timaeus 458b 460b 462b 465d / Ph lebus 615c 616c
8 ARISTOTLE Categories CH 7 [6b20-26] 11b CH 8 [10 11 16] 15a b [10b 6-11 14] 15d 16b / Generation and Corruption K 1 CH 2 [315b 32 316 4] 411b c / Metaphys s BK V CH 4 [1014b20-27] 535a C 1 4 [1020b3-8] [1020b 14 17] 541d CH 8 [1024b10-16] 546c BK X CH 1 [1 5 b1 1053b8] 578d 580a BK XI CH 6 [1063 22-28] 591c BK XII CH 1 [1069a18 25] 598a BK XIII C 1 8 [1083 1 17] 614d / Soul BK III CH 1 [425 14 19] 657b / Sense and the Sensibl CH 6 [445b4 446 2] 683b 684c CH 7 [448a20-b16] 687 d [449a21 30] 688d 689a
10 G LEN Natural Faculties BK 1 CH 2 167d 168b
11 EUCLID Eleme ts BK VII DEFINITIONS 16-19 127b
11 N COMACHUS Arithmetic BK II 831d 841c
12 LUCRETIUS Natu e of Th gs BK 1 [298 304] 4d BK II [398-521] 20a 21c [677-68,] 23c d [730-864] 24b 26a BK III [221 227] 32d 33a BK IV [26-268] 44b 47d [522 721] 51a 53d
17 PLOTINUS Second E nead TR IV CH 13 55b d / Fourth Ennead TR VII CH 8 196a b / F fth Ennead TR 1 CH 4 210 / Si th Ennead TR III CH 13 5 287d 289
19 AQUINAS Summa Theologica PART 1 Q 8 A 2 REP 3 35c 36b Q 42 A 1 REP 1 2 224b 225d Q 78 A 3 REP 2 410a 411d
20 AQUIN S S mma Th ol g ca PART 1 II Q 40 A 2 s 2b-4a Q 50 A 1 REP 3 6 7b Q 5 15d 19c Q 53 A 2 3 21a 22d PART II II Q 24 A 4 10 491d-498 PART III Q 7 A 2 754c 755c
23 HO BES Leviath n P RT 1 49a d PART 1 1 172b
31 DESC RTES R les XII 19a c / Obj tio s and Repl 162d 165d 228c 229c 231a b
34 NEWTON Optics K 1 428a b 431 -455a esp 450a-453a
35 LOCKE Huma Understa d g BK II C 1 VII SECT 9-26 134c 138b pas m CH XXI SECT 3 178d SECT 75 200b d 1 XX II SECT 8-9 206a c SECT 11 206d 207a SECT 37 214a b CH XXXI S CT 2 239b d BK IV C 1 II SECT 9-13 311b 312b CH III S CT 12 14 316a d SECT 28 322a c
35 BERKELEY Human Knowledge SECT 9-15 414d 416a SECT 25 417d-418a SECT 3 427b c SECT 102 432d-433a
35 HUME Human Understanding SECT XII DIV 122 505c d
42 KANT Pure Reason 15b c 23a 24a 32d 33b [fn 1] 68a 72c 211c 213a
43 MILL Utilitarianism 448c d 475b [fn 1]
46 HEGEL Philosophy of Right PART 1 par 63 28b c ADDITIONS 40 122d 123b
50 MARX Capital 149d
53 JAMES Psychology 104b 319b 322a 346a 348a
54 FREUD Hysteria 87a / Interpretation of Dreams 384d / Narcissism 403d 404a / Beyond the Pleasure Principle 639b d

1b The relat on of quantities equality and proportion

7 PLATO Phaedo 228d 229c / Parmenides 494a c 500c 502a 508c d 510d 511a / Theaetetus 518b 519b
8 ARISTOTLE Categories CH 6 [6a2, 35] 10d 11a / Generation and Corruption BK II CH 6 [333 27 34] 434a / Metaphysics BK V CH 13 [1020 22 26] 541c CH 15 [1020b26-1021 14] 542a c BK X CH 3 [1054b1 3] 581b CH 5-6 583a 584c BK XIV CH 1 [1088a20-29] 620c / Memory and Reminiscence CH 2 [45 b7 23] 694b d
9 ARISTOTLE Ethics BK II CH 6 [1106a-6-b8] 351d 352a BK V CH 3 5 378c 381d passim / Politics BK V CH 1 [1301b29-36] 503a
11 EUCLID Elements BK 1 COMMON NOTIO S 2a PROP 4 4a b PROP 8 6b 7a PROP 26 16a 17b BK V 81a 98b esp DEFINITIONS 5 81a 7 9 10 81b BK VI PROP 23 117a b BK X 191a 300b
11 ARCHI IEDES Sphere and Cyl nder BK 1 ASSUMPTIONS 404b / Spirals 484b / Quadra tu e of the Parabola 527a b
11 NICOMACHUS Arithmetic BK 1 II 821d 831d BK II 841c 848d
16 KEPLER Harmonies of the World 1012b-1014b 1078b 1080a
17 PLOTINUS Sixth Ennead TR 1 1 CH 15 2 9a-c
19 AQUINAS Summa Theolog ca PART 1 Q 13 A 7 ANS 68d 70d Q 42 A 1 ANS and REP 1 224b 225d Q 47 A 2 REP 2 257b 258c
20 AQUINAS Summa Theologica PART 1 II Q 113 A 9 AN 368d 369c
28 G IL O Two New Sc ences FIRST D Y 142a 145a
31 DESCART Di cou se PART II 47c / Geom et y BK 295a 298b BK III 332b 341b
34 NEWTON Princip l s BK 1 LE 1A 1 25a LEM 1A 11 SCHOL 31b 32 BK II LEMM 1 159b LEM 1A 2 168a 169b
35 LOCKE Human Understa ding BK IV CH II S CT 9 1 311b c
38 ROUSSEAU Social Co tract BK III 407b 408b

42 KANT *Pure Reason* 73 d 11c 213a / *J dge ment* 497a-498b passim
50 MARX *Capital* 19a 25d esp 19d 20b 25a d
53 JAMES *Psyc iolo y* 551a 874a 878a esp 874b 875a

2 The k nds of quantity continuous and dis continuous

7 PLATO *Parmenides* 499d 500c / *Th aetetus* 515b-c
8 ARIS OTLE *Categories* CH 6 [4b -5 37] 9a d / *Physics* BK IV C 1 4 [2 a29-b4] 290 CH 5 [21 b3-6] 291d BK V CH 3 [227 10-34] 307d 308b BK VI CH 1 2 312b d 315d / *H a ens* BK I C 1 1 [268a6-11] 359a / *Genera t on a d Corr ption* BK I CH 2 [315b25 317a17] 411b-413a BK I CH 10 [337a22 34] 439b c / *M taphysics* BK III CH 4 [1001 4-b25] 519d 520c; BK V CH 6 [1015b35-1016a17] 536b c [10 6b6-32] 537a b CH 13 [1020 9-14] 541b BK VIII CH 3 [1043b33 1044 4] 568b d K X CH 1 [105 15 37] 578b d CH 3 [1 54a-0-29] 581a BK XI CH 1 [068b26-1 69 14] 597d 598a c K XIV CH 1 [1087b34 1 88 14] 620 b
9 AR STOTLE *Eth cs* BK II CH 6 [1 6a26- 8] 351d
11 EUCLID *Elements* BK V D NITIONS 3-5 81 BK VII DEFIN TIONS 2 127a 20 127b BK X P OP 1 191b 192a
11 ARCHIMED *Sphere and Cylinder* BK 1 A SUMPTIONS 5 404b / *Spirals* 484b / *Quad ature f th Parabola* 527 b
11 NICOMACHUS *A thmet* BK 811d 812b
17 PLOTINUS *S co d Enn d* TR IV C 1 , 52c / *F u th Enn d* TR II CH 1 139d 140a / *S xth E n d* TR I CH 4 253b 254b TR III CH 13 287d 288a
19 AQUINA *S mma Theol g a* PART I Q 3 A 1 RE 14b 15b Q 7 AA 3 4 32c 34c Q 11 2 47d-48d Q 30 A 3 ANS and REP 2 169b-170c Q 42 1 REP 1 224b 225d Q 52 A 1 278d 279b Q 85 A 8 R 2 460b 461b
20 AQU N S *Summa Th olog ca* P RT II I Q 24 A 4 REP 1 491d 492b PAR III Q 7 A 12 R 1 754 755c
28 G LIL O *Tu N w Scien* RST DAY 139c 153a passim TH RD DAY 201a 202
30 B ON *No m Org m* BK I APH 48 110d 111a
31 D SCARTES *Rul x* 32b 33b / *Disco r e* PART IV 52d 53a / *M dtat n* V 93b / *Geometry* BK I 295 296b
31 S NOZA *Ethic* RT I R 13 COROL 359d PRO 15 S OL 360b 361d
33 PASCAL *Geometric l Dem st a ion* 434b 439b
34 NEWTON *Pri p e* BK I LEMMA 1 25a LEMMA 1 SCHOL, 31 32a
35 LOCKE *Hum n Under t nd g* K CH XV S CT 9 164b d CH X I CT 3 4 165d 166b
35 BERKEL Y *Human Kno ' age* S CT 3-13 437 -439c
35 HUM *Human Und rstand ng* SECT XII DIV 124-125 506a 507a
42 K NT *P re Reason* 66d 72c esp 68a 72c 131c 135a 140a c esp 137d 138d [ant thesis] 152a d 161d 163a
51 TOLSTOY *Wa and Peace* BK XI 469a d

3 The magnitudes of geometry the relations of dimensionality

8 ARISTOTLE *Cat gories* CI 6 [5 1 23] 9b-c CH 8 [11-16] 15a b / *Topics* BK VI C 1 6 [43b 11 23] 197b / *H ens* BK I CH 359a c BK II CH 4 [286b12-33] 378a-c / *Metaphys cs* K I CH 9 [992 10-24] 510b c BK V CH 6 [1 16b25-3] 537b BK XI 1 CH 2 [1077a14 37] 608b d
11 EUCLID *Elements* BK I DEFINITIONS 1 5 1 14 1b BK XI D INITION 1 301a
11 NICOMACHUS *Arithmet* BK I 832b d
16 KEPL R *Ep t me* K IV 865a b
17 P OTINUS *Sixth Ennead* TR II CH 13 276a c TR II CH 3 14 287d 289a
19 AQUINAS *Summa Theologica* PART I Q 85 A 8 R P 2 460b-461b
23 HO S *Le than* ART IV 269d
31 D CART *Rules* XIV 29b-32 / *D s urse* RT IV 52d 53a / *M d t tions* V 93 d VI 96b d / *Object s and Repl s* 216d 217c 228c 229a
35 LO KE *Human Understand g* BK II CH XIII SECT 5-6 149b d
42 KANT *Pu e Rea on* 25a b
53 JAM S *Psychology* 876b 878a

3a St ght lines their length and the r re l t ons angle perpend culars parallels

8 ARISTOTLE *Prio A alyt cs* BK I CH 24 [41b 14 2] 58c CH 35 66c d BK CH 16 [64b28 65 9] 85c d / *P stério Analytics* BK I CH 4 [73 34-38] 100b CH 5 101b 102b passim CH 24 [85b37-86 3] 117b-c / *Topics* K VI CH 11 [48b23-33] 203a / *H avens* BK I CH 2 [268b15 20] 359d / *Met physics* BK IX CH 9 [1051a-3-6] 577c
9 ARI TOTL *Ga t of An m l* CH 9 [708b34-709a-] 247b
11 EUC ID *Eleme ts* BK I DEFIN TION 4 8 12 1a 23 2a POSTULAT 1 2 4-5 2 RO 34 2b 21b K II RO 1 38a 39 K IV PRO 10 73b 74b BK VI INITIONS 3 99 PRO 2 7 100b 112 P O 30 123 b P O 32 124b 125 K X 191a 300b p ssim XI 1 IT ON 1 301b ROP 1 23 302b 319 ROP 26 321b 323 RO 35 332b-334b K XII RO 5- 2 372b 381
11 ARC MED S *Spher a d Cylinder* K 1 DEFIN TIONS 1-2 404 A SU PTION 1 404b PROP 2 405 b / *Spirals* P O 1 - 484b
16 PT Y *Alm ge t* K I 26a 28b
16 CO NICU *Revolut f tl H a ly Sphere* BK I 543a 545b K I 569b-570
19 AQU NA *S mma Theolog a* PAR Q 85 A 8 R 460b-461b

(3 *The magnitudes of geometry: the relations of dimensionality 3a Straight lines: their lengths and their relations; angles, perpendiculars, parallels*)

28 Galileo *Two New Sciences*, first day 149d; 150d; third day 233d
34 Newton *Principles*, bk i, lemma 16 53b-54a; lemma 23 67a; lemma 26 71a-72a; bk iii, lemma 7 339b
42 Kant *Pure Reason* 110a; 212c-d
52 Dostoevsky *Brothers Karamazov*, bk v 121a-b
53 James *Psychology* 876b-877a

3b Curved lines: their kinds, number, and degree

8 Aristotle *Heavens*, bk i, ch 2 [268b 5-20] 359d
11 Euclid *Elements*, bk i, definitions 2-3 1a
11 Archimedes *Sphere and Cylinder*, bk i, definitions 1-2 404a; assumption 2 404b / *Spirals*, definitions-prop 28 490-501a
28 Galileo *Two New Sciences*, second day 195b-c
31 Descartes *Geometry*, bk i-iii 298b-332b; bk iii 341a-353b
34 Newton *Principles*, bk i, lemma 1 29b-30b; lemma 5-prop 29 and schol 50a-75b; lemma 28 76b-78a; prop 48-56 102b-105a; bk iii, lemma 3 189b-190a; bk ii, lemma 5 338b-339a

3b(1) Circles

8 Aristotle *Categories*, ch 7 [7b29-33] 12c-d / *Prior Analytics*, bk i, ch 24 [41b14-21] 58c; bk ii, ch 25 [69a30-34] 91a-b / *Posterior Analytics*, bk ii, ch 1 [94a20-35] 128d-129a / *Heavens*, bk ii, ch 4 [286b13-287a3] 378b- / *Meteorology*, bk iii, ch 3 [373a6-17] 477a-d; ch 5 480a-481 / *Metaphysics*, bk x, ch 9 [1 ... 7-29] 577c
11 Euclid *Elements*, bk i, definitions 15-18 1b; bk i, iv 41 80b; bk vi, prop 33 125a-126; bk xii, prop 2 339a-340b; prop 16 362b-363a
11 Archimedes *Sphere and Cylinder*, bk i, assumption 5 404b; prop 1 405a; prop 3-6 405b-408a / *Measurement of a Circle* 447a-451b / *Spirals*, prop 3-9 485a-488a / *Book of Lemmas* 561-568b
11 Apollonius *Conics*, bk i, prop 4-5 606b-608b; prop 9 613b-614b; prop 17-19 626a-627b; prop 21 628-629a; prop 32 638a-640a; prop 34 641-643a; prop 36-41 643b-653b; prop 43 654b-655b; prop 45 657-658b; prop 47 659b-660b; prop 50 663-666b; bk ii, prop 6-7 686b-687; prop 26-30 700b-702b; prop 44 710b-711a; prop 49-51 714b-726a; bk iii, prop 1-3 731a-735b; prop 16-17 747b-750a; prop 27 761b-762b; prop 37-38 772b-775b; prop 42 780b-782a; prop 45-50 783b-790a; prop 53-54 792b-796a
16 Ptolemy *Almagest*, bk i 14a-21a; 26a-28b; bk vi 208a-b
16 Copernicus *Revolutions of the Heavenly Spheres*, bk i 532b-538a; 545b-556b
28 Galileo *Two New Sciences*, first day 149d-150d; 155b-156d
31 Descartes *Geometry*, bk ii 313b-314a
34 Newton *Principles*, bk i, lemma 29 138a-b

3b(2) Ellipses

11 Archimedes *Conoids and Spheroids*, prop 4-9 459a-464a; prop 11-14 464b-467a
11 Apollonius *Conics*, bk i, prop 13 618a-620a; prop 15 621b-624a; second definitions 9-11 626a; prop 17-19 626a-627b; prop 21 628a-629a; prop 23 630a-b; prop 25 631a-b; prop 30 636a-637; prop 32 638a-640a; prop 34 641a-643a; prop 36-41 643b-653b; prop 43 654b-655b; prop 45 657a-658b; prop 47 659b-660b; prop 50 663-666b; prop 56-58 675b-679b; bk ii, prop 6-7 686b-687a; prop 26-30 700b-702b; prop 44-45 710b-711b; prop 47-50 712b-723a; bk ii, prop 52; bk iii, prop 3 726b-735b; bk iii, prop 16-17 747b-750a; prop 27 761b-62b; prop 37-38 772b-775b; prop 42 780b-78; prop 45-50 783b-790a; prop 52-54 791b-796a
16 Kepler *Epitome*, bk v 975-984b passim
31 Descartes *Geometry*, bk ii 308b-313b
34 Newton *Principles*, bk i, lemma 12 41a; lemma 15-prop 29 and schol 50a-75b esp lemma 15-prop 18 50a-51a; lemma 28 cor-prop 31 and schol 78a-81a
34 Huygens *Light*, ch v 604b-606b

3b(3) Parabolas

11 Archimedes *Conoids and Spheroids*, prop 3 458b-459a; prop 11 464b-465a / *Quadrature of the Parabola*, prop 1-5 528a-529b; prop 14-24 531b-536a; prop 24 537a-b / *Method*, prop 1 571a-572b
11 Apollonius *Conics*, bk i, prop 11 615a-616a; prop 17-22 626a-628a; prop 22 629a-630a; prop 24 631a; prop 26-27 631b-634a; prop 32-33 638-640b; prop 35 643-b; prop 42 653b-654b; prop 46 659-b; prop 49 661b-663a; prop 52-53 668a-670b; bk ii, prop 3 686a; prop 7 687a; prop 24 699b-700a; prop 28-30 701b-702b; prop 44 710b-711a; prop 46 711b-712a; prop 48-51 713-726a; bk iii, prop 1-3 731a-735b; prop 16-17 747b-750a; prop 37-38 772b-775b; prop 41 778b-780b; prop 54 793b-796a
28 Galileo *Two New Sciences*, second day 193a-195c; fourth day 238d-239d
31 Descartes *Geometry*, bk i 308b-310b
34 Newton *Principles*, bk i, lemma 13-14 45a; lemma 15-prop 29 and schol 50a-75b esp prop 19-51; prop 30 76-b

(3d *Surfaces*)

3d(2) The relations of surfaces to lines and solids

8 ARISTOTLE *Metaphysics* BK I CH 9 [992a10–24] 510b-c
11 EUCLID *Elements* BK XI DEFINITIONS 2-8 301a b PROP 1–8 302b 308a PROP 11 19 309a 314b PROP 24 319b 320b PROP 28 323b 324a PROP 38 336a 337a
11 ARCHIMEDES *Conoids and Spheroids* DEFINITIONS 455a b PROP 7 9 461a 464a PROP 11 18 464b-468b / *Floating Bodies* BK I PROP 1 538a b
11 APOLLONIUS *Conics* BK I FIRST DEFINITIONS 1 604 PROP 1 14 604b 621b PROP 52 58 668a 679b
28 GALILEO *Two New Sciences* FIRST DAY 142b 143d

3e Solids regular and irregular

11 EUCLID *Elements* BK X DEFINITIONS 1 301a 12 28 301b 302b PROP 27 323a b BK XIII PROP 13 18 381a 396a
11 ARCHIMEDES *Conoids and Spheroids* 452a 455a
11 APOLLONIUS *Conics* BK FIRST DEFINITIONS 2 3 604a
11 NICOMACHUS *Arithmetic* BK II 832c d 836b c
16 KEPLER *Epitome* BK IV 863b 868b / *Harmonies of the World* 1011a 1012a

3e(1) The determination of volume

11 EUCLID *Elements* BK XI DEFINITIONS 9 10 301b PROP 25 320b 321b PROP 28–34 323b 332b PROP 36 37 334b 336a PROP 39 337a b BK XII PROP 3 5 341a 362b PROP 18 367a 368b
11 ARCHIMEDES *Sphere and Cylinder* BK I LEMMAS PROP 20 414b-418a PROP 26 28 421a-422b PROP 31 32 423b-424b PROP 34 and COROL 425b 427a PROP 38 428b-429a PROP 41 431a b PROP 44 433a b BK II PROP 1 2 434b-437a PROP 4-5 437b-441b PROP 7-9 442b-446a / *Conoids and Spheroids* PROP 10 464a PROP 18 32 468b-481b / *Method* PROP 2 4 572b-576b PROP 7 579a 580b PROP 10–15 583 592a
28 GALILEO *Two New Sciences* FIRST DAY 154c 155b SECOND DAY 196b c

3e(2) The relations of solids inscribed and circumscribed spheres solids of revolution

8 ARISTOTLE *Heavens* BK II CH 4 [287a2 11] 378c
11 EUCLID *Elements* BK XI DEFINITIONS 14 301b 18 21 302a BK XII PROP 3 4 341a 344b PROP 7 347b 348b PROP 17 363a 367a BK XIII PROP 13 17 381a 393a
11 ARCHIMEDES *Sphere and Cylinder* BK I DEFINITIONS 5-6 404a PROP 23 32 419a 424b PROP 35 41 427a-431b / *Conoids and Spheroids* 452a-455a PROP 19–20 468b-469b
33 PASCAL *Equilibrium of Liquids* 395a b
34 HUYGENS *Light* CH V 603b 604b

4 Discrete quantities number and numbering

7 PLATO *Parmenides* 496a d
8 ARISTOTLE *Categories* CH 6 [4b23 36] 9 b [5a24–36] 9c d / *Posterior Analytics* BK I CH [72a22 24] 98d / *Physics* BK III CH 7 [207b1 ...] 285d 286a BK IV CH 11 [219b2–8] 299b [220a21 24] 300a CH 12 [220a27 32] 3.. CH 14 [223a21 25] 303a / *Metaphysics* BK VIII CH 3 [1043b33 1044a14] 568b-d BK X CH 1 [1053a24 31] 579d 580a CH 3 [1054a20 2..] 581a CH 6 [1056b32 1057a7] 584b BK XIII CH 6–9 611d 618c BK XIV 619b d 626d
11 EUCLID *Elements* BK VII DEFINITIONS 1 127a
11 ARCHIMEDES *Sand Reckoner* 520a 5 6b
11 NICOMACHUS *Arithmetic* BK I 811d 812b 813d 814b
17 PLOTINUS *Fifth Ennead* TR V CH 4-5 230b 231a / *Sixth Ennead* TR I CH 4-5 253b 254d TR II CH 13 276a c TR VI 310d 321b
18 AUGUSTINE *Confessions* BK X par 19 76a b / *Christian Doctrine* BK II CH 38 654b-c
19 AQUINAS *Summa Theologica* PART I Q 5 A 5 ANS 26c 27c Q 3 A 3 169b 170c Q 85 A 8 REP 2 460b-461b Q 118 A 2 REP 2 601c-603b
20 AQUINAS *Summa Theologica* PART I-II Q 52 A 1 ANS 15d 18a
33 PASCAL *Arithmetical Triangle* 455a-456b
35 LOCKE *Human Understanding* BK II CH X 165c 167c
53 JAMES *Psychology* 874b-876b

4a The kinds of numbers odd-even square-triangular prime composite

7 PLATO *Euthyphro* 196d 197a / *Phaedo* 244c d / *Gorgias* 254a-c / *Parmenides* 496a-d / *Theaetetus* 515b-c
8 ARISTOTLE *Posterior Analytics* BK II CH 13 [96a34 b2] 131c / *Topics* BK III CH 6 [120b6–10] 196a CH 11 6] 168c BK VI CH 4 [142b6–10] 196a [149a29–37] 203c d / *Sophistical Refutations* BK V CH 13 [173b8 10] 239a / *Metaphysics* BK V CH 14 [1020b2–8] 541d
11 EUCLID *Elements* BK VII DEFINITIONS 6-14 127a b 16 19 127b 21 22 128a PROP 1 128a b PROP 21 32 139b 144b BK VIII PROP 5 154b 155a PROP 9 157a 158a PROP 11 159b 160b PROP 14 27 161b-170a BK IX PROP 1 10 171a 176b PROP 16-17 182a b PROP 20–36 183b 190b BK X PROP 2.. LEMMA 1 2 213a 214b
11 NICOMACHUS *Arithmetic* BK I 814b-821d BK I 831d 841c
28 GALILEO *Two New Sciences* FIRST DAY 144b-d

33 PASCAL *Ar thmetical Tria gle* 455a-456a 470b-473b / *Correspo dence with Fermat* 486b

4b The relat ons of numbers to one another multiples and fractions

7 PLATO *Gorgias* 254a-c / *Tl ea tetus* 515b-c
8 ARI TOTLE *Phys cs* BK IV CH 8 [2 5^b12 19] 295b / *Metaphy cs* BK V CH 15 [1020^b26-102 14] 542a-c
11 EUCL D *Elements* BK VII V I 127a 170a esp BK VII D NITIONS 3-5 127 I5 20 127b BK IX P OP I 19 171a 183b PRO 35 188b-189
11 ARC IM ES *Co o ds a d Spher ds* LEMMA 455b 456a L M A to PRO 2 456b-457b / *Spirals* PRO 10-11 488a-489b / *Sand Reckoner* 520a 526b
11 N COMACHUS *Arithmetic* K I II 821d 831d BK II 841c 848d
16 KEPLER *Harmon s f the World* 1012b 1014b
28 G ILEO *Tu N w S nces* FIRST DAY 144b 145 COND D Y 193b
33 P SCAL *A ithm t l Tr angl* 447a-454b 456b 460a 468b-473b / *Corr ponden e with Ferm t* 477b 478a 484b 485a 486b
42 KANT *Pu e Re on* 212d 213a

4 The n mber series as a cont nuum

11 EUCL D *El ments* BK V D FINITIONS 5 81a K I D F NIT ON 20 127b BK X ROP 5-9 195a 198b
31 D SC RT *Geometry* 295a 353b esp BK I 295a 298b
33 P CA *Geom t ical Dem trat o* 434b 439b pa im
34 NEWTON *Principl s* BK I LEMM - 168a 169b
45 FOU IER *Theory f H at* 169a 251b pas s m

5 Phys cal quant tie

5 Space the matrix of figu and distance

7 PLATO *T m us* 456a-458a
8 AR STOTLE *C teg* H 6 [5 6- 3] 9b c / *Physics* BK IV I -9 287a 297c
12 LUCRET US *Natu of Th gs* K I [4 8 448] 6b [95 1007] 12d 13b
17 PLOTINUS *Sixth En d* TR I I CH II 286d 287a
19 AQUINA *Summ Th l gica* ART I Q 8 A 2 RE 3 35c 36b
30 B CON *N m Orga um* K APH 48 110d 111a
31 D S ARTES *Rules* XIV 28a 33b / *D cou se* P R V 52d 53a / *Obj ct and Replies* 169c 170 231 b
33 P S AL *Va m* 370 372 373a / *G omet ric l Dem nst t* 434a-439b
34 N WTO *Pr ciple* D FIN O S HO 8b 13a esp 8b 9a 12a b BK III GENERAL SCHOL 370a b / *O tics* BK I I 54 b 543a
35 LOCKE *H Under tanding* K I CH XV 162b 165c pas im
35 BERK LEY *Human Kno ledge* SECT 110-117 434b-436a S CT I 3 132 437c 439c
42 K NT *Pure Reason* 23a 26b 28b 33d 160b 163a
45 FOURIER *Theory of Heat* 249a 251b pass m
53 JA IES *P ychology* 99a 548b 552a esp 548b 549a 626b 877b

5b T me the number of mot on

7 PLATO *Ti aeus* 450c-451d / *P rmen des* 505a b
8 ARISTOTL *Catego es* CH 6 [5 6-14] 9b-c / *Physics* K IV CH 10-14 297 304a c BK VI 312b d 325d p m esp CH I 2 312b d 315d / *Generat o d Corr pt on* BK CH 10 [337 34] 439b / *Metaphys s* BK V H 13 [1020 25-33] 541c BK XII CH 6 [I 71^b6-I] 601b / *Memory and Reminiscence* CH 2 [452^b -29] 694b 695a
12 AURELIUS *Meditations* K VI SE T 15 275a b
16 KEPLER *Epitome* K IV 905a 907a BK V 979b 985b / *Harm n es of th World* 1019b 1020b
17 PLOTINUS *Th d Ennead* TR VII 119b 129a pa ssm esp CH 8 123b-126a / *Fourth Ennead* TR IV CH 15 165 d / *Sixth E ead* TR CH 4-5 253b 254d CH 16 260d 261c TR I CH 286d 287a CH 22 294c
18 AUGUSTIN *Co f ss ns* BK X par 12 4 92b 99a / *City of G d* BK XI H 6 325 d K XII H 5 351b 352d passim
19 AQU NAS *Summ Theol gic* PART I Q 7 A 3 RE 4 32c 33 Q 10 A I AN 40d 41d A 4-6 43b 46d Q 53 A 3 283b 284d Q 57 A 3 REP 2 297b 298a Q 63 A 6 REP 4 330c 331c Q 66 A 4 R 4 348d 349d PART I I Q 3 A 2 ANS and REP 753c 754
20 AQUINAS *S mm Theol gica* PART I II Q 113 A 7 R 5 366 367c PART I SUP L Q 84 A 3 985d 989b
21 D NTE *D ne C m dy* PAR DISE XXVII [6-120] 148b c
28 GA EO *Tw Ne v S iences* TH D DAY 201 202a
30 BACON *N vum Orga m* BK I APH 48 110d 111 K APH 46 177c 179a
31 D AR S *Obj t ons a d Replies* 110d 111 213b
32 M TON *Paradis Lost* K V [577 59] 187b 188a
33 PA CAL *G ometr c l D m strat n* 432b-433b 434a 439b passim
34 NEWTON *Pri ciple* DEF TIONS HO 8b-13a esp 8b 9b 10a 12a b K PRO I 3 d HOL 32b 35b P O 4 O OL VI VI 36 RO D O II 42 O 5 46b-47 K I I H NOM NON 272 273b PHENO N N VI 274a 275

(5 *Physical quantities* 5b *Time the number of motion*)

35 Locke *Human Understanding* bk ii ch xiv 155b-162a esp sect 22 159d ch xv 162b-165c passim
35 Berkeley *Human Knowledge* sect 97 98 431d-432a
35 Hume *Human Understanding* sect xii div 124 125 506a 507a
36 Sterne *Tristram Shandy* 292a 293b
42 Kant *Pure Reason* 23a 24a 26b 33d esp 27a 72c 76c 130b 133c
45 Fourier *Theory of Heat* 249a 251b passim
51 Tolstoy *War and Peace* bk xi 469a c
53 James *Psychology* 398a-408a passim esp 399a b 407a-408a

5c The quantity of motion momentum velocity acceleration

8 Aristotle *Physics* bk iv ch 8 [215ª24-216ª11] 295a d ch 11 [219ª 0-13] 298d 299a bk v ch 4 [228ª20-ᵇ12] 309b-c bk vi 312b d 325d passim esp ch 1 2 312b d 315d bk vii ch 4 330d 333a bk viii ch 8 348b 352a / *Metaphysics* bk v ch 6 [1016 4 7] 536b c ch 13 [1020 25 33] 541c bk x ch 1 [1052ᵇ24 31] 579b
12 Lucretius *Nature of Things* bk ii [294 307] 18d 19a
17 Plotinus *Sixth Ennead* tr i ch 4-5 253b 254d ch 16 260d 261c
19 Aquinas *Summa Theologica* part i q 7 a 3 rep 4 32 33c q 25 2 rep 3 144c 145b
28 Galileo *Two New Sciences* first day 166d 168a third day 197b-c 200a 207d 209a 210c 224b 225d fourth day 240a d 243d 249b
30 Bacon *Novum Organum* bk ii aph 35 163 c aph 48 179d 188b
34 Newton *Principles* def i 5b def vii viii 7-8a laws 14a b coro i 15a coro ii 16b-17b laws of motion schol, 20a 22a bk i lemma 10 28b-29a lemma i schol, 31b 32a prop corol i 33a / *Optics* bk i 540a 541b
34 Huygens *Light* ch i 558b-563b passim
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5d Mass its relation to weight

7 Plato *Timaeus* 462d-463c
8 Aristotle *Physics* bk i ch 9 296b 297c / *Heavens* bk i ch 6 [273ᵇ22 274 8] 364c 365b bk iii ch 2 [301 21 ᵇ18] 392c 393a bk iv ch 1 2 399d-401c
12 Lucretius *Nature of Things* bk i [358-369] 5c bk ii [80-108] 16a b [294 296] 18d
16 Kepler *Epitome* bk v 970b
17 Plotinus *Second Ennead* tr vii ch 1 2 62d-64b
28 Gilbert *Loadstone* bk vi 115d 116a
28 Galileo *Two New Sciences* first day 158b c
30 Bacon *Novum Organum* bk ii aph 33 154d 155a aph 35 163c d aph 36 166b-c aph 40 171d 172b aph 48 179d 180a
34 Newton *Principles* def i a bk ii prop 24 203a 204a bk iii prop 6 279b 281b prop 8 282b 283b prop 20 291b-294b
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45 Faraday *Researches in Electricity* 632a

5e Force its measure and the measure of its effect

8 Aristotle *Physics* bk vii ch 5 333a-d bk viii ch 10 [266ª25 ᵇ21] 353c 354d / *Heavens* bk iii ch 2 [301ᵇ2 32] 392d 393b
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16 Kepler *Epitome* bk iv 938b-939a bk v 969a 971b
19 Aquinas *Summa Theologica* part i q 105 a 4 rep 1 541c 542a
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28 Galileo *Two New Sciences* third day 202d 203a
31 Descartes *Rules* ix 15c / *Objections and Replies* 231c 232a
34 Newton *Principles* def iii viii 5b-8a definitions schol, 11a 13a laws of motion 14a 24a bk i lemma 10 28b-29a prop 1 17 and schol 32b-50a esp prop 6 37b 38b prop 70-93 and schol 131b-152b bk iii prop -9 276a 284a esp prop 6 corol v 281b general schol, 371b-372a / *Optics* bk iii 531b 541b 54 a
45 Faraday *Researches in Electricity* 338a b 514d 532a 646b 655d 670a 673d 817a 818d
51 Tolstoy *War and Peace* bk xiii 5 0d epilogue ii 678a b

6 The measurements of quantities the relation of magnitudes and multitudes the units of measurement

8 Aristotle *Physics* bk iv ch 12 [220ᵇ15 3] 300c d ch 14 [223ᵇ12 224 1] 303c d / *Metaphysics* bk iii ch 2 [997ᵇ25 33] 516c bk v ch 6 [1016ᵇ18-31] 537b bk x ch 1 [1052ᵇ15 1053 31] 579a 580a
9 Aristotle *Ethics* bk v ch 5 [1133ª5 ᵇ 9] 380d 381c
17 Plotinus *Sixth Ennead* tr i ch 4 253b-254b

6a Commensurable and ncommen urable m gnitude

6b M th mat cal p ocedures in mea urement uperpo tion congruence ratio and proportion, parameters nd coordin tes

6c Physical procedures in measurement ex periment and observation clocks rules balances

7 Infinite qu nt ty the actual i finite and the potent lly nfinite qu nt ty the m the matic l and phys c l nfinite of the gre t nd the small

(7 *Infinite quantity the actual infinite and the potentially infinite quantity the mathematical and physical infinite of the great and the small*)

11 EUCLID *Elements* BK IX PROP 20 183b 184a BK X PROP I 191b 192a
11 ARCHIMEDES *Sphere and Cylinder* BK I ASSUMPTIONS 5 404b / *Spirals* 484b / *Sand Reckoner* 520a 526b / *Quadrature of the Parabola* 527 b / *Method* 569a 592a passim
11 APOLLONIUS *Conics* BK II PROP 14 691b 692a
11 NICOMACHUS *Arithmetic* BK I 812a BK II 829b
12 LUCRETIUS *Nature of Things* BK I [551-634] 7d 8d [951 1113] 12d 14d
16 KEPLER *Epitome* BK V 973a 975a
17 PLOTINUS *Sixth Ennead* TR VI CH 2 3 311b 312b CH 17 319d 320a
18 AUGUSTINE *City of God* BK XI CH 5 324d 325c BK XII CH 8 354b-d
19 AQUINAS *Summa Theologica* PART I Q 7 31a 34c PART I II Q I A 4 REP 2 612a 613a
20 AQUINAS *Summa Theologica* PART III Q 7 A 12 REP I 754c 755c Q 10 A 3 REP I 2 769d 771b
28 GALILEO *Two New Sciences* FIRST DAY 139c 153a passim esp 145b 146c 150d 151c THIRD DAY 201a 202a 205b d 224b-c
31 DESCARTES *Objections and Replies* 112b
31 SPINOZA *Ethics* PART I PROP 15 SCHOL 360b 361d
33 PASCAL *Pensées* 121 195a 231 233 213b-214a / *Geometrical Demonstration* 434a 439b
34 NEWTON *Principles* BK I LEMMA I II and SCHOL 25a 32a esp LEMMA II SCHOL 31a b BK II LEMMA 2 168a 169b BK III GENERAL SCHOL 370a b / *Optics* BK III 543a
35 LOCKE *Human Understanding* BK II CH XIII SECT 4 149b SECT 6 149c d CH XIV SECT 6-27 160c 161a SECT 30 161c d CH XV SECT 2 4 162c 163b SECT 9 164b-d CH XVI SECT 8-CH XVII SECT 22 167c 174a esp CH XVII SECT 7-8 169b 170a SECT 12 21 170d 173d CH XXIX SECT 16 237b 238a
35 BERKELEY *Human Knowledge* SECT 123 132 437c-439c
35 HUME *Human Understanding* SECT XII DIV 124 506a c
42 KANT *Pure Reason* 24d 26d 130b 133c 135a 137a c 152a d 158a 159d 160b 163a / *Judgement* 498b 501b
43 FEDERALIST NUMBER 31 103d
46 HEGEL *Philosophy of Right* ADDITIONS 17 119a
51 TOLSTOY *War and Peace* BK XI 469a d EPILOGUE II 695b-c

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Discussions relevant to the conception of the categories as transcendental concepts of the understanding *see* FORM 1c JUDGMENT 8c-8d MEMORY AND IMAGINATION 6c(1) MIND 1e(1) PRINCIPLE 2b(3)

Other considerations of the relation between quantity and quality *see* MECHANICS 4b QUALITY 3a

The conception of equality and inequality as the basic relation between quantities *see* SAME AND OTHER 3d and for the general theory of ratios and proportions *see* MATHEMATICS 4c RELATION 5a(3) SAME AND OTHER 3b

The division of quantities into magnitudes and multitudes or continuous and discontinuous quantities *see* MATHEMATICS 2c ONE AND MANY 3a(2)-3a(4) and for the conception of space and time as magnitudes *see* MECHANICS 3a SPACE 1a TIME 1

Other discussions of magnitudes and numbers as the objects of geometry and arithmetic *see* MATHEMATICS 2 ONE AND MANY 2a SPACE 3b-3c TIME 6c

Other discussions of such physical quantities as space time motion mass and force *see* ASTRONOMY 7 CHANGE 5a-5b MECHANICS 5d-5e(2) 6b-6e SPACE 3d TIME 4

The general theory of measurement *see* MATHEMATICS 5a MECHANICS 3a PHYSICS 4d

Other discussions of infinite quantity *see* INFINITY 1b 3a-3e SPACE 3a TIME 2b

ADDITIONAL READINGS

Listed below are works not included in *G eat Books of the W estern World* but relevant to the idea and topics with which this chapter deals These orks are div ded into two groups

I Works by authors represented in th s colle tion
II Works by authors not represented in this collection

For the date place, and other facts concerning the publication of the works cited consult the Bibliography of Additional Readings which follo s the last chapter of *T e G at Ideas*

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—— *Un versal Arithmet c*
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K NT *Metaphysical Found tions of Natu l Science* D V I
HE EL *Science of Logic* VOL I BK I S CT II–I I

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OREME *Treat se on the B eadth f F m*
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Chapter 77 REASONING

INTRODUCTION

IN the tradition of western thought certain verbal expressions have become shorthand for the fundamental ideas in the discussion of which they happen to be so often repeated This may be due to the influence of the text books used in the schools which copy one from another and hand down an easily recited jargon from generation to generation In most cases the great books themselves are probably the original source though they have usually suffered over simplification or distortion when their insights are thus transmitted

Featherless biped and rational animal are for example stock phrases to illustrate the idea that a definition consists of genus and differentia—the class to which man in this instance belongs and the attribute which differentiates him from other members of this class Statements such as the whole is greater than the part or two plus two equals four similarly serve to represent axioms or at least statements which whether or not they can be proved are usually accepted as true without proof In the field of reasoning the familiar verbal landmark is All men are mortal Socrates is a man therefore Socrates is mortal Even those who have never heard of syllogisms or who are throughly innocent of the age-old controversies about the theory of the syllogism and the difference between deduction and induction might offer this sequence of statements if pressed to say what reasoning is they tried to answer by giving an example

The example shopworn though it is and far from being the perfect paradigm does convey certain insights into the nature of reasoning which are generally undisputed

The word therefore which connects the third statement with the first two signifies a relationship which is sometimes described in terms of cause and effect as by Aristotle and sometimes in terms of antecedent and consequent as by Hobbes The premises (*i e* the statements which precede the therefore) cause the conclusion it is said We know that Socrates is mortal *because* we know that Socrates is a man and that all men are mortal The premises are the cause in the sense of the *reason why* the conclusion may be regarded as true.

The conclusion is also said to *follow from* the premises or the premises are said to *imply* or *yield* the conclusion *If* the premises are tr *then* the truth of the conclusion can be inferred or proved The relationship between the premises and the conclusion seems to be the same whether the act of reasoning is called proof or inference The distinction in meaning between these two words seems to be one of direction We speak of proving a conclusion when we look toward the premises as the foundation for its truth we speak of inferring a conclusion when we look toward it as something which can be drawn from the premises.

The words if and then indicate that reasoning is a motion of the mind from one statement to another Sometimes the inference is immediate as when we argue that if all men are mortal then some mortals are men Here only two propositions are involved one of which is simply the converse of the other Those who deny that immediate inference is truly inference (because a proposition and its converse are merely two ways of stating the same fact) insist that implicitly or explicitly reasoning always involves *at least* three statements In any case a single statement like Socrates is a man or even a pair of statements connected by and rather than if then —*e g* Socrates is a man and Socrates is mortal —does not express what is commonly recognized as reasoning The motion of reasoning does however appear in this sequence of statements If Socrates is a

man then Socrates is mortal even though it omits a statement that may be necessary to the validity of the reasoning namely All men are mortal

Thus the familiar grammatical distinctions of word (or phrase) sentence and paragraph do not seem to provide a perfect parallel for the distinctions which the logicians make between terms propositions and syllogisms But this much is clear Just as a single word or phrase like man or rational animal can never express a proposition but only a term so a simple sentence expresses only a proposition and never a syllogism and a compound sentence one made up of a number of sentences expresses a syllogism only if its verbal construction somehow indicates that they form a sequence in which one *follows* from the others or if they are related in such a way that the truth of one is caused by the truth of the others

THE CHAPTER ON IDEA (and perhaps also the chapter on DEFINITION) deals with that content or act of the mind—whether a percept or a concept an image or an abstraction—which is verbally expressed in words or phrases and of which the *term* is the logical representative The chapter on JUDGMENT (and perhaps also the chapter on PRINCIPLE) deals with the mental act or content that requires a sentence for its expression and is logically represented by the *proposition* Here we are concerned with mental activity which involves not only two or more ideas but also two or more judgments so connected that the mind passes from one to another

Whether the logical structure that Aristotle calls a syllogism represents all forms of the mental activity called reasoning is one of the great traditional issues Hume suggests for example that animals reason without making use of syllogisms and Descartes and Locke seem to hold that the highest forms of thinking such as occur in mathematics or philosophy cannot be reduced to syllogisms except perhaps by a *tour de force*

We face a different sort of problem when we compare reasoning with other acts of the mind—with conception (or the having of ideas) and with judgment (or the connecting of ideas with one another in the manner which medieval writers call composition and division) No one denies that reasoning is thinking nor does anyone deny that there are forms of thinking which are not reasoning since conceiving and judging are generally regarded as kinds of thinking or modes of thought Reasoning is merely that mode of thought which is a *process*—the going step by step from one statement to another

The problem which arises from the comparison of reasoning with other modes of thought turns on the question whether the mind can learn anything without having to think rationally Can certain things be known by insight or instinct by induction or intuition rather than by reasoning? Are there truths which cannot be known by reasoning at all but only by some other mode of thought? These questions in turn raise the problem of the priority or superiority of such modes of thought as do not consist in reasoning The theory discussed in the chapter on INDUCTION—that induction is prior to reasoning because intuitive generalization from experience must provide the starting points for demonstration—indicates one solution of the problem Our present concern however goes beyond the issue concerning induction and deduction to the most general contrast between the intuitive and the rational

FOR PLOTINUS ANY FORM of thinking—not merely reasoning—signifies a deficiency or weakness In the scale of intellectual beings man occupies the lowest rank because he reasons But even the pure intelligences which know intuitively rank below the One because even the simplest act of thought involves some duality of subject and object The One according to Plotinus transcends thought even as it transcends being The super essential he says is the supra cogitative The One has no need for intellect on being always self sufficing

Other writers do not go as far as this Christian theologians do however contrast the human mind with the angelic intellect and the mind of God by saying that the latter are supra rational *i e* above the need to reason They do not like Plotinus hold that the transcendent being transcends thought itself—certainly not insofar as they discuss the divine ideas But the kind of thinking which is not an instantaneous act of vision or an immediate intuition involves

the mind in a process of thought somehow akin to change or motion and this the theologians hold cannot take place in any immutable being—the angels or God

The human intellect according to Aquinas gradually comes to know the truth by a kind of movement and discursive intellectual operation by advancing from one thing known to another But if from the knowledge of a known principle [men] were straightway to perceive as known all its consequent conclusions then there would be no place for discursiveness in the human intellect Such is the condition of the angels because in the truths which they know naturally they at once behold all things whatsoever that can be known in them

That says Aquinas is why the angels are called *intellectual* beings and men are called *rational* Recourse to reasoning on the part of men betrays the feebleness of their intellectual light For if they possessed the fullness of intellectual light like the angels then in the first grasping of principles they would at once comprehend all that they implied by perceiving at once whatever could be reasoned out of them

The type of intuitive apprehension which the angels enjoy is even more perfectly exemplified in God s knowledge In the divine knowledge according to Aquinas there is no discursiveness —no succession neither the turning from one thought to another nor the advance from the known to the unknown by reasoning from principles to conclusion The divine knowledge Aquinas explains is a single all embracing act of vision in which God sees all things in one thing alone which is Himself and therefore sees all things together and not successively Apart from participation in the vision of God through supernatural light all human thinking on the natural plane is discursive Even the conception and the judgment are discursive in the sense that the one involves an act of abstraction or definition and the other involves a composition or division of concepts But though it is always discursive human thinking is not according to Aquinas always involved in the *motion* of reasoning that is the transition from one thought to another Reasoning he says is compared to understanding —i e, the act of judgment by which we affirm or deny a single proposition— as movement is to rest or acquisition to possession

Descartes uses the word intuition to name the way in which we know certain truths immediately and with certitude He distinguishes intuition from deduction by the fact that into the conception of the latter there enters a certain movement or succession into that of the former there does not The first principles are given by intuition alone while on the contrary the remote conclusions are furnished only by deduction But while deduction which Descartes says he understands to be all necessary inference from other facts that are known with certainty supplements intuition it is never at any stage of the reasoning process independent of intuition

Not only does intuition according to Descartes supply the first principles or ultimate premises of reasoning but it also certifies each step in the process He asks us to consider this consequence 2 and 2 amount to the same as 3 and 1 Now we need to see intuitively not only that 2 and 2 make 4 and that likewise 3 and 1 make 4 but further that the third of the above statements is a necessary conclusion from these two

If in addition to knowing the premises by intuition the drawing of a conclusion from them is as Descartes says itself effected by intuition —if the act of inference rests on the intuition that the conclusion follows logically from the premises—in what way does deduction or reasoning supplement intuition? To this question Descartes replies that though the mind has a clear vision of each step in the process, it cannot comprehend in one intuition all the connections involved in a long chain of reasoning Only by taking the steps one after another can we know that the last link in a long chain is connected with the first even though we do not take in by means of one and the same act of vision all the intermediate links on which that connection depends but only remember that we have taken them successively under review

Like Descartes Locke contrasts intuition and reasoning or intuitive and demonstrative knowledge Sometimes the mind perceives the agreement or disagreement of two ideas immediately by themselves without the interven

tion of any other and this says Locke we may call intuitive knowledge When the mind cannot so bring its ideas together as by their immediate comparison to perceive their agreement or disagreement it is fain by the intervention of other ideas to discover the agreement or disagreement which it search es and this is that which we call reasoning

Again like Descartes Locke asks What need is there of reason? It is necessary he thinks both for the enlargement of our knowledge and regulating our assent Sense and intui tion reach but very little of the way The great est part of our knowledge depends upon deduc tions and intermediate ideas and in those cases where we are fain to substitute assent instead of knowledge and take propositions for true with out being certain they are so we have need to find out examine and compare the grounds of their probability But though reasoning en lar es our knowledge beyond what can be known intuitively reasoning produces certain knowledge according to Locke only if every step in reasoning has intuitive certainty

To make anything a demonstration it is necessary to perceive the immediate agreement of the intervening ideas whereby the agree ment or disagreement of the two ideas under examination (whereof the one is always the first and the other the last in the account) is found

On this view of reasoning nothing can be known demonstratively or by proof unless some things can be known intuitively *i e* without inference or proof Locke and Descartes seem to agree with Aquinas and Aristotle that dem onstration depends upon indemonstrable truths whether these are called axioms immediate propositions first principles or self evident max ims Locke and Descartes on the one hand stress the point that in reasoning the logical connection between premises and conclusion is also indemonstrable and must be intuitively perceived Aquinas and Aristotle on the other repeatedly observe that the truth of the con clusion is implicitly contained in the truth of the premises so that the advance which reason ing appears to make from the known to the un known consists in coming to know actually what is already potentially known Neverthe less they unl ke Descartes and Locke maintain that reasoning extends knowledge even though it may not be the method of initial discovery

A somewhat contrary view seems to be taken by Hume If the objects under consideration are matters of fact rather than the relations be tween our own ideas the kind of reasoning which goes from premises to conclusion avails not at all The beliefs we hold about such mat ters according to Hume result from mental operations which are a species of natural in stinct which no reasoning or process of thought is able either to produce or to prevent What he calls experimental reasoning or rea soning concerning matters of fact is founded he says on a species of Analogy which leads us to expect from any cause the same events which we have observed to result from similar causes

Not only men but also animals reason in this way But Hume thinks it is impossible that this inference of the animal can be founded on any process of argument or reasoning by which he concludes that like events must follow like objects The experimental reasoning itself which we possess in common with beasts and on which the whole conduct of l fe depends is nothing but a species of instinct or mechanical power that acts in us unknown to ourselves and in its chief operations is not directed by any such relations or comparisons of ideas as are the proper objects of our intellectual facul ties

THE FOREGOING considerations indicate how di verse theories of the role of reasoning arise from diverse theories of the nature and kinds of knowledge in animals men angels and God According as various distinctions are made be tween human knowledge and opinion or be tween the way in which d fferent objects can be known or between speculative and practical interests so too different formulations are g ven of the nature of reasoning

Aristotle s distinction for example between scientific and dialectical or rhetorical reasoning turns upon h s understanding of th difference between the objects of certain knowl dge and the objects of probable opinion Th s differenc he says makes it equally fool sh to pt prob able reaso ng from a mathematician and to demand from a rh to ician scientific proofs

Hume s distinction between *a priori* and *a posteriori* reasoning—*i.e* between reasoning from principles and reasoning from experience—depends upon his understanding of what matters must be submitted to experience and of the manner in which experience generates belief. The distinction which Aquinas makes between demonstrations *propter quid* and demonstrations *quia*—*i e* between pro ing *what* something is from its causes and proving *that* it is from its effects—depends upon his understanding of the difference between essence and existence as objects of rational knowledge

To take an example in the opposite vein, Locke s theory that the same type of demon stration is possible in both mathematics and the moral sciences, seems to rest upon his view that all knowledge consists in the comparison of ideas In contrast to this other theories, which hold that the mode of reasoning differs in dif ferent disciplines (especially in mathematics and morals or in metaphysics and the natural sci ences) seem to arise from the contrary view ng at once whatev different fields of inquiry the ob them f knowledge are different.

The type of intuitive apprehension odes of rea the angels enjoy is even more perfectly exem os plified in God s knowledge In the divine knowledge according to Aquinas, there is no discursiveness —no succession neither the turning from one thought to another nor the advance from the known to the unknown by reasoning from principles to conclusion The di vine knowledge Aquinas explains is a single all embracing act of vision in which God sees all things in one thing alone which is Himself, and therefore sees all things together and not successively Apart from participation in the vision of God through supernatural light all human thinking on the natural plane is discur sive Even the conception and the judgment are discursive in the sense that the one involves an act of abstraction or definition and the other involves a composition or d vis on of concepts

sis, in natural science as well as m[athematics] consists in going from effects to causes ... the method of synthesis goes from ... effects. Newton relates the difference be[tween] analysis and synthesis to the diff[erence] ... inductive and deductive reasoning ... of distinguishing between inducti[ve and de]ductive reasoning in terms of ... effects to causes or from causes to e[ffects] also seem to be related to the dis[tinction] Aquinas makes between demonstrat[ion] (*i e* reasoning which proves only ... thing exists) and demonstration ... (*i.e* reasoning which pro es what ... is—its nature or properties) The ... God exists is, according to Aquinas, ... stration *quia* It is also *a posteriori* rea[soning,] reasoning from effect to cause But ... not call it inductive In one pass[age] he seems to regard induction as ... whereby we can come to ... what God is From natural things, ... one does not com by a demon[stration] reason to know non natural things ... induction of reason one may know ... above nature since the natural be[ar] ... resemblance to the supernatural

It is This sense of the word induc[tion] ... tuition this like that in which Aristotl[e] ... is as Descartes says itself not like that ... tion —if the act of inference deductive ... tion that the conclusion follows logical[ly] ... the premises—in what way does deduct[ive] reasoning supplement intuition? To th[is ques]tion Descartes replies that though the ... has a clear vision of each step in th ... it cannot comprehend in one intuition ... connections in olved in a long chain of ... ing Only by taking the steps one af[ter] ... can we know that the last link in a lon[g chain] is connected with the first even thou[gh we can]not take in by means of one and the sam[e] vision all the intermediate links on wh[ich the] connection depends but only remem[ber] ...

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ERENT THEORIES of definition also affect
)lace which is assigned to definition in
ing Hobbes for example regards reason
a kind of calculation with names which
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ings The operations of addition and sub-
on when done with words rather than with
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the consequence of the names of all the
to the name of the whole or from the
of the whole and one part to the name
other part It is nothing but *reckoning*
is adding and subtracting) of the conse
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with the theory that definitions state the
al natures of things not just the mean
f words holds that a definition may be
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l nature as well as an indemonstrable
nent of essential nature In the latter
he definition functions as a principle in
stration

ording to William James reasoning like
tion is a selective activity of the mind
serves an individual s interest or purpose
thinking he says is first last and al
or the sake of my doing Reasoning is
s for a subjective interest to attain some
ular conclusion or to gratify some special
ity It makes no difference whether the
st is practical or the cur osity speculative
process of reasoning will be the same
h the element which provides a solution
problem in any emergency will be called
son if the emergency be theoretical a
if it be practical

writers who like Aristotle and Aqui
rd the speculative and the p actical as
though related orders of thought and
ge seem to think that practical reason
s own syllogistic f rm Practical delib
for them are d fferent from theoretic
ations The conclusion of theoretic
is an assertion that something s either
lse whereas the conclusion of prac
eration is a judgment that something
evil and therefore should e ther be
voided According to Aristotle practical reasoning of the sort which ends in a decision that leads to action takes the form of a syllogism which has one universal and one par ticular premise The major premise is a general rule of conduct the minor premise a particular perception of fact In the example Aristotle gives of the practical syllogism the major premise is the rule that *everything sweet ought to be tasted* and the minor premise is the percep tion that *this particular thing is sweet* These two premises lead to the practical conclusion that *this particular thing ought to be tasted*

Not all practical reasoning however is con cerned with reaching decisions or prompting action in particular cases The rules of conduct which decisions and actions apply may them selves be the products of practical reasoning The process by which general rules are derived from even more general principles—the pre- cepts of law or morality—involves according to Aquinas a form of thinking distinctly differ ent from the theoretic or speculative sort He po nts out in his Treatise on Law that we are able to formulate certain practical rules only by making particular determinations of universal principles not by drawing deductions from them Something may be derived from the natural law in two ways he writes first as a conclusion from premises secondly by way of determination of certain generalities The first way is like that by which in the speculat ve sciences demonstrated conclusions are drawn from the principles while the second mode is likened to that whereby in the arts general forms are particularized as to details " Of these two ways of thinking in the field of law it would appear that it is only the second type which is peculiar to the practical as opposed to the speculative order

THE DISCUSSION OF reasoning in relation to knowledge opinion and act on or in relation to different d sciplines and sciences, usually pre supposes a theory of the form which reasoning takes regardless of its subject matter or use This fact is most explicitly attested by the or der of three great books concerned with rea on ing Aristotle s *Posterior Analyt cs* deals with the theory of demonstration in the sc ences His *Top cs* deals with the theory of prob ble argu ment or reasoning in the sphere of opinion.

Both are preceded by his *Prior Analytics* which treats of the syllogism in terms of its purely formal structure and its various forms In the later tradition the distinction between the problems of the *Prior* and the *Posterior Analytics* comes to be represented by the separation between what are called formal and material logic

The formal analysis of reasoning centers on the problem of its cogency Quite apart from any consideration of the truth of its premises or conclusions reasoning is true or false according as it is valid or invalid on purely logical grounds From premises which are in fact false a conclusion which may be either true or false can be truly inferred if the structure of the reasoning is formally valid—that is if the form of the premises stands in a certain logically prescribed relation to the form of the conclusion The logical problem then is to prescribe the formal relationships among propositions which permit valid inference from certain propositions to others without regard to the content of the propositions or their truth in fact

Defining a syllogism as discourse in which certain things being stated something other than what is stated follows of necessity from their being so Aristotle says I call that a perfect syllogism which needs nothing other than what has been stated to make plain what necessarily follows a syllogism is imperfect if it needs either one or more propositions which are indeed the necessary consequences of the terms set down but have not been expressly stated as premises Using the letters S and P to symbolize the subject and predicate of the conclusion and the letter M to symbolize the middle term the term which appears in the premises but not in the conclusion Aristotle states the form of a perfect syllogism in the following manner All M is P all S is M therefore all S is P

The first of these propositions the one which contains the predicate of the conclusion is called the major premise the second the one which contains the subject of the conclusion the minor premise the subject of the conclusion is called the minor term the predicate the major term Aristotle classifies syllogisms into three figures or formal types according to the position of the middle term either as subject of the major premise and predicate of the minor in the first figure or as predicate in both or as subject in both in the second and third figures respectively Then according to whether the premises are universal propositions or particular (All M is P or Some S is M) and each is either affirmative or negative (All M is P or Some S is not M) he further distinguishes within each figure a number of valid moods or formally correct patterns of inference

For example in no figure can a valid mood be constructed with two particular or two negative premises No conclusion can be drawn from the two particular statements that some poisons are liquids and that some liquids are indispensable to life nor can any conclusion be drawn from the two negative statements that no triangles are parallelograms and no rhomboids are parallelograms In the first figure the minor premise can be particular and must be affirmative the major can be negative and must be universal In this figure the following combinations of premises— some figures are not rectangular with all rectangular figures are parallelograms or all prime numbers are odd with some odd numbers are squares —yield no conclusions In the second figure one premise must be negative Here it is impossible to draw a valid conclusion from two affirmative premises Nothing follows from the two affirmative statements that all fish swim and all whales swim In the third figure only a particular conclusion can be drawn from a pair of premises both of which are universal From the proposition that no men are wise and the proposition that all men are mortal we can conclude only that some mortals are not wise

From these examples it will be seen that Aristotle s rules of the syllogism are rules concerning the quantity and quality of the premises required in each figure to permit a valid inference and as in the third figure these rules permit only a particular conclusion to be drawn, so for all figures they determine the character of the conclusion which can be drawn from premises of a certain quantity and quality If one premise is negative the conclusion must be negative If one premise is particular the conclusion must be particular

There seems to be one universal principle of the syllogism which underlies all these specific rules for the valid moods in different figures

When one thing is predicated of another Aristotle says all that which is predicable of the predicate will be predicable also of the subject The negative aspect of this principle is immediately obvious What cannot be predicated of a predicate cannot be predicated of its subject In the tradition of formal logic this principle is sometimes stated in terms of the relation of classes rather than in terms of subjects and predicates if one class is included in a second and that second class is included in a third the first is included in the third and if one class excludes another the classes which it includes are also excluded from that other

The principle of the syllogism is traditionally called the *dictum de omni et nullo* The *dictum de omni* which Kant in his *Introduction to Logic* calls the supreme principle of affirmative syllogisms is thus expressed by him Whatever is universally affirmed of a concept is also affirmed of everything contained under it The *dictum de nullo* according to Kant states that whatever is universally denied of a concept is also denied of everything that is contained under it Kant appears to think that both these [illegible]

the syllogism is merely a special case of transitivity as it appears in the relation of implication for if P implies Q and Q implies R then P implies R

James recognizes this when he writes that *the principle of mediate predication or subsumption* is only the axiom of skipped intermediaries applied to a series of successive predications It expresses the fact that any earlier term in the series stands to any later term in the same relation in which it stands to any intermediate term in other words that *whatever has an attribute has all the attributes of that attribute* or more briefly still that *whatever is of a kind is of that kind's kind* Along with the *axiom of mediate equality* equals of equals are equal the rule of mediate predication or subsumption is according to James a special case of the law that skipping intermediary terms leaves relations the same This AXIOM OF SKIPPED INTERMEDIARIES OF OF TRANSFERRED RELATIONS seems to be on the whole the broadest and deepest law of man s thought

JAMES ATTEMPT TO state a law of thought or [illegible]

Both are preceded by his *Prior Analytics* which treats of the syllogism in terms of its purely formal structure and its various forms In the later tradition the distinction between the problems of the *Prior* and the *Posterior Analytics* comes to be represented by the separation between what are called formal and material logic

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ubject in both in the second and third figur
respectively Then according to whether th
premises are universal propositions or particul
(All M is P or Some S is M) and each is ei
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constructed with two particular or two negativ
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are parallelograms and no rhomboids are pa
lelograms In the first figure the minor premis
can be particular and mu t be affirmative th
major can be negative and must be universal
In figure the following combinations c
— some figures are not rectangular
ectangular figures are parallelo rams,

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passa es referred to For example in 4 HOMER *Iliad* BK II [265 283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the passage is in section d of page 12

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lo ver hal es of the page For example in 53 JAMES *Psychology* 116a 119b the passa e begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in t o columns the letters a and b refer to the upper and lower halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the p ge For example in 7 PLATO *Symposium* 163b 164c the passage begins in the lo er half of the left hand side of page 163 and ends in the upper half of the right hand side of pa e 164

AUTHOR S DIVISION One or more of the main divisions of a vork (such as P RT BK CH SECT) are somet mes ncluded in the reference l ne numbers in brackets are given in certain cases *e g Iliad* K II [265 283] 12d

BIBLE REF RENCES The references are to book chapter and verse When the King James and Douay ve sions diffe in title of books or in the numbering of chapte s or verses the Kin James version s c ted first and the Douay indicated by a *(D)* follo vs *e g* OLD TESTAMENT *Nehem ah* 7 45—*(D) II Esd as* 7 46

SYMBOLS The abbreviation esp calls the reader s attention to one or more especially relevant parts of a wh le reference p ssim signifies that the topic is d scussed intermittently rather than continuously in the work or passage cited

For addition l informat on c ncern ng the style of the references see the Explanat on of Reference Style for general guidance in the use of *The G eat Ideas* consult the Preface

1 Definit ons or descriptions of reasoning the process of thought

7 PLATO *Phaedo* 244c 245c / *Republ c* BK VI VII 383d 398c / *Thea tetus* 537d 538a / *Sophist* 570a 577b / *St tesman* 594d 595d / *Seventh Letter* 809c 810d

8 ARISTOTL *Prio Analytics* BK I CH 1[24b18 22] 39c / *Top cs* BK I CH 143 d / *Sophist c l Ref t tions* CH 1 [165 1 3] 227b CH 2 227d 228a

12 EPICTETUS *D scou ses* K I CH 7 112b-113d

17 PLOTINUS *F urth E n d* TR IV C I 12 164b

18 AUGUSTINE *Chr sti n Doctrine* BK II CH 31 651d 652b

19 AQUINAS *S mma Th log ca* RT I Q 14 A 7 81d 82b Q 58 A 3 301d 302d A 4 ANS 302d 303c Q 79 A 8-9 421c-423d A 10 RE 2 3 423d-424d Q 84 A 3 REP 3 443d 444d Q 85 A 5 ANS 457d-458d

20 AQUINAS *Summ The logica* ART II I Q 2 A 1 391a 392a Q 8 I REP 2 417a d PART III Q 11 A 3 773d 774c

23 HOBBES *Leviatha* P RT I 56d 57 58a-c 60a

28 H R EY *On A m l Gener t n* 332a 335c

31 DE C RT S *Rule* 1a-40 c pas m esp V-VII 7d 12a X X 15d 25a XI 28b 29 32d / *Object n and Repl es* 137a

35 LOCKE *Human Understanding* BK IV CH II SECT 2 13 309d 312b CH XV SECT 1 365a-c CH XVII 371c 380d pas im esp SECT 2 3 1d 372b

38 ROUSSEAU *Inequality* 337d 342c

42 KANT *Pure Reason* 15d 16c 20a 34c 35b 108a 209d esp 109d 112d 115d 116a 118a-c 119a b 129c 130c 158a 159d, 173b 174a, 185b c 187a c 193d 194b 199a c 224a 22 a / *Judgement* 551a 552c 570b 572c

45 LAVOISIER *Elements of Chemi try* PREF 1a

49 D RWIN *Descent of Man* 292b-293d 299b-300a

53 J M S *P y holo y* 146a 187a esp 161a 176a 179b 184a 186a 360a 362b 381b-385b 664 693b esp 666b 668 672b 678b 690a b

54 FREUD *Interp etation of Dreams* 337a 363b-364b esp 364a b 367b-c 377c 379c 379a c 384c 385c / *Unconscio s* 442d-443a / *Ego a d Id* 700a 701d esp 701d

1a Hum n re son ng compared with the reasoning of animals

8 ARISTOTLE *Metaphy ics* BK I CH 1 [980b25 27] 499b / *S ul* BK II CH 3 [414b17 20] 644d [415a7 12] 645b / *Memory and Remi iscence* CH 2 [453 5 14] 695b

9 ARI TOTL *Hist ry f A mal* BK I CH 1 [488b20-27] 9d / *Ethics* BK VI CH 7 [1141a22

28] 390a b BK VII CH 3 [1147^b -5] 397d / Pol t s K VI C I 13 [133 39-^{b}8] 537a b
10 G EN Natural Facult es BK I C I 12 173 c
12 AU ELIUS M d t t BK V S CT 16 271c d BK VI S CT 23 276b BK IX SECT 9 292b d
19 AQUINAS Summa Th eolo ica PART I Q 76 A 5 R 4 394c 396 Q 78 A 4 ANS and REP 5 411d 413d Q 81 A 3 ANS and R P 2 430c 431d Q 86 A 4 RE 3 463d-464d Q 96 A I REP 4 510b 511b P RT I II Q 13 A 2 REP 3 673c 674
0 AQUIN S Summa Theologica PART I II Q 50 A 3 REP 2 8b 9a
3 HO BES Leviathan PART I 52b 53a b 53d 54a 57d 59b c 63a 64a-c 79b c PART II 100 -c PART IV 267b
5 MONT NE Essays 215a 223b passim esp 220b 223b
0 BACON No um Orga um BK II APH 35 163d
1 D CARTES Discourse PART V 59a 60c / Obje t ons a d Repl s 156c d
2 MILTON Par dise Lost BK VII [449-549] 227a 229 BK VIII [369-451] 240a 242a BK IX [549-566] 259b
33 PA CAL Pens s 339-344 233a b
35 LO KE Hum Underst ndi g BK II CH XI SE T I 145d 146a CH XXVII S CT 8 221a 222a K I CH XVII SECT I 371 -d
35 BERKE EY Hum Knowled INTRO SECT 11 407b-408a
35 HUME Human Understa d g SECT IX 487b 488c
36 SWIFT Gull ver PART V 151b 152a 159b 160a
38 ROUSSEAU In qu l ty 337d 338a 341d 342 / S cial C tract BK I 393b
42 KANT Pur Reas n 199c 200 / P f Meta phys al Elements f Ethics 372 b / Judgement 602b d [fn]
49 DARWIN D cent f Man 292b 297c esp 292b 294c 400a c
51 T LSTOY War d P a EPILO U II 689 690
53 JAME Psychology 665a 666b 676b 677a esp 677a 679a 686b esp 679 683a 686a b 873a

b D scurs e easoning contrast d with m m d ate intuit on

7 PLAT Rep bl K VI 386d 388a / Se nth Letter 809c 810d
8 A ISTOTLE M taphysi s K IX CH 6 [48^b 18 34] 574 CH 9 [05 -34] 577b c K XI CH 7 [072^{b}14- 9] 602d 603a CH 9 605a d
17 PLOTINUS Fourth E n d TR I CH 18 151b R IV H 159a d H 164b / F fth En d TR I 3 216c 217b TR V CH I 2 228b-229d pas m CH 7 231d 232b TR VI 235b-237d
18 C s s BK IX par 3 25

68a-c BK XI par 16 102d 103a / City of God BK X C I 22 296d 297a BK XI CH 2 323a-c CH 7 325a-c C I I 333a d CH 29 339a b BK XVI CH 6 426c 427a BK XXII CH 29 614b d
19 AQUINAS Summa Th ologica PART I Q 14 A 7 81d 82b Q 34 A I R 2 185b 187b Q 46 A 2 REP 3 253a 255a Q 58 A 3 301d 302d A 4 AN 302d 303c Q 79 A 8 ANS a d REP 3 421c 422b Q 85 A 5 ANS 457d 458d PART I II Q 14 A I REP 2 677b 678 Q 15 A 4 REP I 683b 684a
21 DANTE Di ine Comedy PARADISE [43-45] 108a
30 BACON Advancement of Lea ning 17b-c / Novum Organum K I APH 15 149a
31 DESCART S Rules III 4a d X 17b 18b XII 23b-c / Objections and Repli 123 b
31 S NOZA Ethics RT II PROP 4 SCHOL 2 388a b P RT V PROP 28 459b
32 MILTON Pa adi e Lost BK V [469-505] 185b 186a
33 PASCAL Pensées 1-5 171a 173 277-288 222b 224b
35 LOCKE Human U derstand g K I CH III ECT 23 119b 120a BK V CH I S T 9 309b CH X ECT 2 3 349a-c CH XVII SECT 14 17 378c 379c
36 STERNE Tristram Shandy 318b 319a
42 KANT Pure Reason 33a d / P ct cal Reason 320c 321b 337a c 350 351b / Judg me t 572d 574b 579

1c The role of sen memory and im g na t on in reasoning perceptu l infer nce r t onal remin c nce the collation of im ge

7 PLATO M n 179d 183a 188d 189a / Ph edo 224a 225c 228a 230 / Republic BK III 333b-d K VI- II 383d 398c / Seventh Letter 809 810d
8 ARISTOTLE Posterior A lytics BK I CH 9 136a 137a c / S ul BK I CH I [403 - 16] 632a b BK II CH 7 [43 14 ^{b} 9] 663d 664b / Sen a d the S nsible CH [436^{b}17-437 17] 673d 674 / Mem ry and Remin cence 2 [453 5 15] 695b
12 LUCRETIU N t r of Things K IV [353-521] 48d 51a esp [469-5] 50b 51a
18 AUGU IN C f sions BK X par 10 73d 74a par 6- 9 75b 76b pa 26-38 78a 81 / City f G d K V CH 6 269b c
19 AQUINAS Summa Th ologica ART Q 78 A 4 AN d REP 4-5 411d 413d Q 81 A 3 ANS and REP 430c 431d
23 H Leviatha PART 52b 54 60 b PART IV 267b
28 H v y On A m l Gen at 332 335 p 334c d
31 D SC RT Rul x 18b 20b-d X V 28a 33b / Dis ou se RT 41d / Object ons a d Repl es 229d 230

30 BACON *Advancement of Learning* 57d 58a 59c 60c / *Novum Organum* BK I APH 14 107d 108a

31 DESCARTES *Rules* X 16d 17a / *Objections and Replies* 126b 127c

35 LOCKE *Human Understanding* BK II CH XI SECT 13 146b-c

42 KANT *Pure Reason* 36a 37d esp 36b 37b 180c 182b 193a b

44 BOSWELL *Johnson* 134c d

51 TOLSTOY *War and Peace* EPILOGUE II 683d 684a

53 JAMES *Psychology* 872b 879b 882a esp 880b 882a

3b Lack of cogency in reasoning: invalid syllogisms; formal fallacies

8 ARISTOTLE *Prior Analytics* BK II CH 6-21 85c 89b / *Posterior Analytics* BK I CH 12 [77b 6-34] 106d 107a / *Physics* BK I CH 2 [185 5 12] 259d CH 3 [186 4-9] 260d 261a

9 ARISTOTLE *Rhetoric* BK II CH 24 649d 651d

12 EPICTETUS *Discourses* BK I CH 7 112b-113d

18 AUGUSTINE *Christian Doctrine* BK II CH 31 34 651d 653b

24 RABELAIS *Gargantua and Pantagruel* BK I 23b

31 DESCARTES *Objections and Replies* 126b 127c

33 PASCAL *Vacuum* 368b 369a

42 KANT *Pure Reason* 109b 133d

53 JAMES *Psychology* 108a b 227b 228 236b [fn 2] 526b [fn 1]

3c Lack of truth in reasoning: sophistical argument; material fallacies

7 PLATO *Euthydemus* 65a 84a c / *Phaedo* 237b 238a

8 ARISTOTLE *Prior Analytics* BK I CH 34 35 66b d BK II CH 8 87a b / *Posterior Analytics* BK I CH 16-17 109b 111b / *Topics* BK I CH 1 [100b23 101 8] 143b d BK VIII CH 1 [160b 23 39] 218b c CH 12 13 220c 221d / *Sophistical Refutations* 227a 253d / *Physics* BK I CH 2 [185 5 12] 259d 3 [186 4-9] 260d 261a

9 ARISTOTLE *Rhetoric* BK II CH 24 649d-651d

12 EPICTETUS *Discourses* BK I CH 7 112b-113d

18 AUGUSTINE *Christian Doctrine* BK II CH 31 651d 652b

23 HOBBES *Leviathan* PART I 56b d 58d 60

30 BACON *Advancement of Learning* 60a 61d / *Novum Organum* BK I APH 38-69 109 116b

31 DESCARTES *Rules* X 16d 17a / *Objections and Replies* 126b 127

33 PASCAL *Vacuum* 367a 368b

35 LOCKE *Human Understanding* BK I CH I SECT 1 123 CH X SECT 3 146b-c BK IV CH X SECT 9 379d 380a

35 HUME *Human Understanding* SECT VIII DIV 75 484c SECT XI DIV 132 509 d

42 KANT *Pure Reason* 36d 37d 109b-c 120c 121c 133d

3d Necessity and contingency in reasoning: logical necessity, certainty and probability

8 ARISTOTLE *Prior Analytics* BK I CH I [24b18 26] 39c CH 8-22 45b 57b CH 30 [46 3 10] 63d BK II CH 25 91a b / *Posterior Analytics* BK I CH 2 [72a25 b4] 98d 99a CH 6 [75 8] 103a b / *Topics* BK I CH I [100a25 b23] 143a b BK II CH 5 [112 16- 3] 157b- BK VIII CH 12 [162 35 b2] 220c / *Physics* BK II CH 9 [200 15 29] 277c d / *Metaphysics* BK V CH 5 [1015b6-8] 535d 536a BK VII CH 15 [1039b31-1040a8] 563d 564a BK XII CH 8 [1074 4 16] 604c

9 ARISTOTLE *Ethics* BK I CH 3 [1094b12 27] 339d 340a CH 7 [1098a25 b7] 343d 344a BK VI CH 3 388b c / *Rhetoric* BK I CH 1 [1355 3 18] 594b CH 2 [1357a14-30] 596d 597a BK II CH 25 [1402b13 1403 17] 652b-653a

12 EPICTETUS *Discourses* BK I CH 7 112d 113d CH 26 131b

16 COPERNICUS *Revolutions of the Heavenly Spheres* 505a 506a

19 AQUINAS *Summa Theologica* PART I Q 12 A 7 ANS and REP 2 56a 57b Q 19 A 8 REP 3 116a d Q 44 A REP 2 238b 239a Q 47 A 1 REP 3 256a 257b Q 8 A 2 ANS 432d-433c PART I II Q 13 A 5 ANS 675c-676b A 6 REP 1-2 676c 677b

20 AQUINAS *Summa Theologica* PART I II Q 94 A 4 ANS 223d 224d PART II II Q 4 A 8 409a d PART III Q 9 A 3 REP 2 765b 766b

23 HOBBES *Leviathan* PART I 65 d 71c

31 DESCARTES *Rules* II 2a 3b XII 23b / *Discourse* PART 46c 48b / *Meditations* I 76

33 PASCAL *Vacuum* 368b 369a

34 HUYGENS *Light* PREF 551b 552a

35 LOCKE *Human Understanding* BK IV CH XV SECT 3 365a d esp SECT 1 365a c CH XVI 366d 371c passim CH XVII SECT 2 371d 372b SECT 15 17 378d 379c

35 HUME *Human Understanding* SECT IV DIV 20-2 458a c SECT V 469d 470d esp 469d [fn] SECT X DIV 87-88 489b-490b

38 ROUSSEAU *Inequality* 348a

42 KANT *Pure Reason* 14d 17d 18a 194b d / *Intro Metaphysic of Morals* 387a d

53 JAMES *Psychology* 878a 884b

4 The types of reasoning: inference or argument

4a Immediate inference: its relation to mediated inference or reasoning

7 PLATO *Euthyphro* 196d

8 ARISTOTLE *Interpretation* CH 7 [17b 3 37] 27b-c CH [20 6-37] 30d 31b / *Prior*

(4 *The types of reason ng, inference or argument* 4a *Immediate inference its relat on to med ated inference or reasoning*)

Analyt cs BK I CH 2-3 39d-40c BK II CH 8 10 79b 81b CH 22 [67^{b}26-68 24] 89b d
42 KANT *Pure Reason* 17d 18a 109d 111c esp 109d 110a 110d 111c

4b The direction and uses of reasoning the distinction between proof and inference and between demonstration and dis co ery

7 PLATO *Republic* BK VI 383d 388a
8 ARISTOTLE *Posterior Analytics* BK I CH 3 [72^{b}25 33] 99c / *Topics* BK I CH 2 143d 144a / *Sophistical Refutations* CH 2 227d 228a CH 10-11 234d 237c
9 ARISTOTLE *Ethics* BK I CH 4 [1095 30-^{b}13] 340c d
11 ARCHI EDES *Method* 569b 570a
23 HOBBES *Leviathan* PART IV 267a b
30 BA ON *Advancement of Learni* 56c 58b 59c d 96d 97a / *No um Organum* PREF 105a 106d BK I 107a 136a c esp APH II 26 107d 108d A H 29-30 109a APH 69 116a b A H 103 106 127d 128c
31 D SCARTES *Rules* II 2c 3a X 16d 17a XIV 28b c / *D scourse* PART I 46c 48b
33 PASCAL *Pens es* I 171a 172a 40 177b-178a
35 LO KE *Human Underst nd g* BK IV CH VII SEC II 340c 341a CH XVII SECT 2 3 371d 372b SECT 6-7 376c 377b
42 KANT *Pu e Reason* 15d 16c 110d 111c 119a b 193a 200 esp 193d 194b 199a c / *P ctical Re on* 294a b / *Judgem nt* 570b 572b 572d 574b 600d 603d esp 603b-c
53 JAMES *Psychol gy* 381b 385b esp 382a 384 385b 672b 673b

4c Indu t e and deductive reason ng

8 ARISTOTLE *P io Analyt cs* K II CH 23 90 c / *Poster r Analyt cs* K CH I [7 I I] 97a C I 3 [72^{b}25 33] 99c CH 18 111b c K II C I 7 [92 34 ^{b}I] 126b / *Topics* BK I C I 12 148d C I 18 [08^{b}7 12] 152d K VIII CH 14 [164 11 16] 222d
9 ARISTOTLE *Ethi* BK I C 4 [1095 30 ^{b}8] 340c CH 7 [1098 35 ^{b}3] 343d BK VI CH 3 388b c / *Rh to* BK I CH 2 [1356 36 1358 35] 596a 598b K I CH 20 22 640d 645a
28 G LIL O *Two N w Sciences* FOURTH DAY 252a b
28 H RVEY *M ti n f th H t* 280c
30 B CO *Ad a ement of Lea n ng* 42a c 57b-58b 61d 96d 97 / *No m Orga um* K I 107 136a c esp PH I 26 107d 108d P I 69 116a b AP 3 106 127d 12 c
31 D SCARTES *Rule* II 2d 3 III 4c d VII 10b 12a XI 17b 18b XI 23b 24c / *D sco se* PART VI 61d 62c / *Objections and Re ts* 167c d
34 NEWTON *Principle* BK III RULE IV 271b / *Optics* BK III 543a b
35 LOCKE *Human Understanding* BK IV CH XII SECT 6-13 360a 362d
35 HUME *Human Und rstand ng* SECT I DIV 9 454c 455a SECT III DIV 19 458a SECT II DIV 26 460b c SECT VIII DIV 65 4 9b c SECT IX DIV 82 487b-c SECT XII DIV 131 132 508d 509d passim
42 KANT *Pure Reason* 45b-46a 195d 197b
43 MILL *Utilitarianism* 445a 447b passim 475b d [fn 1] passim
45 FARADAY *Researches in Electricity* 6 9a
51 TOLSTOY *War and Peace* EPILOGUE II 690b
53 JAMES *P ychology* 674a 675b esp 675b

4d D rect and indirect argumentation, proof by *reductio ad absurdum* argument from the impossible or ideal case

8 ARISTOTLE *Prior A alytics* BK I CH 23 5 b-58b CH 29 62d 63d BK II CH 11 14 8 b 84b CH 17 86b 87a / *Posterior Analytics* BK I, CH 26 118d 119b / *Top cs* BK VIII CH I [157^{b}34 158 2] 214b c / *Metaphysics* BK IV CH 4 [1006 12 29] 525b c BK XI CH 5 [1061^b 34 1062 12] 590a b
9 ARISTOTLE *Ethics* BK VII CH 2 [1146 22 3] 396b
33 PASCAL *Vacu um* 368b
36 STERNE *Tristram Shandy* 227a 228a

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7 PLATO *Sophist* 558b d
8 ARISTOTLE *Prior A alytics* BK II CH 20 87c d CH 26 91b-d / *Sophistical Refutation* CH 4 II 228b 237c
9 ARISTOTLE *Eth cs* BK VII CH I [1145^{b}I 395b / *Rhetoric* BK II CH 2 [1396^{b}20]-CH 2I [1403 34] 644d 653a c esp CH 25 [1402^{a}29]-CH 6 [1403 34] 651d 653 c
10 GALEN *Natu al Faculties* BK I CH 14 177a 179d
31 DESCARTES *Object ons a d Repl es* 208a c
33 PASCAL *Vacuum* 368b

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7 PLATO *Republic* BK II 316a b BK IV 350a b BK VI V I 383d 391b
8 ARISTOTLE *Pr r A alyt cs* BK II CH 24 90c 91a / *Top s* BK I CH 18 [108 6-19] 152d 153a
9 ARISTOTLE *Rhetoric* K I CH 2 [1357^{b}25 1358 2] 597c d BK II CH 20 [1393^{a}22 1394^a] 640d 641d
20 AQUINAS *Summa Theologica* P RT III S PP. Q 75 A 3 REP 2 938a 939d
23 HOBBES *Leviathan* PART I 60c 61c
30 BACON *N um O ganum* BK I APH 34 109b BK II AP 27 158 b

34 N WTON Principl s BK III GEN RAL SCHOL, 370b 371a
35 LOCKE H m n Understand ng BK II CH XI SECT 2 144a c BK IV CH XVI SECT 12 370b 371a
35 BERKELEY H man Knowledge SECT 105-106 433b-d
35 HUME Huma Unders'a d ng SECT IX DIV 82 487b ECT XI DIV 113 502 d DIV 115 503b
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49 DARWIN O g n of Sp cies 26 241b
53 JAMES Psychology 295a b 677a-678a 686b 690a esp 688a 689a
54 FREUD Civili at on and Its D scontents 801b-c / New Int oductory Lectu es 819a

5 Rea oning n relation to knowledge opin ion and action

5a The fact and the re soned f ct mere bel ef d st ngu shed from bel ef on rational gro nds

7 PLATO Men 188b-189a / Republ c BK V 370d 373c
8 ARI T TLE Posterior A alyt cs BK H 6 [75 12 37] 103 CH 13 107c 108c K II CH I 2 122b d 123 / Soul BK II CH 2 [413 I 9] 643a b
9 AR STOTL Eth cs BK I CH 4 [1095 30 b13] 340c d H 7 [1098 35-b4] 343d BK VI H 3 388b-c I I 392c 393b
11 ARCH MEDES M th d 569b 570a PRO I 572b
20 AQUINAS S mma Theologica ART III Q 9 A 3 R P 2 765b 766b
31 DESCART Rules XVI 35a b
35 LOCKE Huma Understa d g BK I CH XXI SECT 25 210c d
35 HUM H man Understa d g S CT IV 458a 463d pass m esp DIV 28 33 460d-463d S T V 463d 469 pas im esp D V 38 466b c D V 45 469
36 SWIF G ll er PAR V 165a b
42 KANT Pur Re n 228c d 240b 43c / Judgement 601d 607c
43 M L Liberty 283 288c passum / Ut lita sm 445d-446b
46 H L Ph losophy f H t ry IN RO 156d 160b
53 JAM Psy hol gy 689b 690a

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7 PLATO Men 174a 190a c / Republ c BK VI 386d 388a / Parmen des 486a 511d esp 491 c / P l b 610d 613a
8 A ISTOTLE P io An lyt K I CH 30 63d 64b / P tero A lytic 97 137 / M t physic BK VI C I [1 25b1 3] 547b K VII H 5 [39b20-104 8] 563 564a
9 ARISTOTLE Ethics BK VI CH 3 388b c CH 6 389d
23 HO BE Leviathan PART I 58a-c 60a b 60d 65 d PART IV 267a-c
28 HARVEY On A m l Generat n 332a 337a c
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31 D SCARTES Rules I XIII 1a 27d / Discourse PART VI 60d 67a c
33 PASCAL Vacuum 365b 366a 368b 369 / Geometrical Demonstrat 430b-434a 442a 443b
34 N WTON Principles BK III RULES 270a 271b / Optics BK III 543a b
35 LOCKE Human U derstand ng BK III CH XI S CT 16 303 d BK IV CH I SECT 9 308d 309b CH II SECT 13 309d 312b CH IV SECT 7 325b CH VII S CT II 340 341a CH XII SECT 6-13 360a 362d CH XV SECT I 365a c CH XVII 371c 380d pass m esp S CT 4 371d 376c S CT 15 378d 379b
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42 K NT Pu e Rea on 1a 13d 190 191a 194b-c 211c 18d esp 217 d / F nd Prin M taphysic f Morals 264d / Pref M taphysi cal Element of Eth s 365a 366a / Judgement 463a-467a 542c 543a 603b
43 MILL Ut l t n sm 445b d
53 JAM ES P y hology 674a 675b 677b 862a 865a

5b(1) The indemonstrable basis for dem onstration

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8 ARISTOTLE Pr or Analyt s BK I CH I [24 21-b16] 39a-c / Poster or A lytics K CH 3 99b-100a C I 7 [75 38 b7] 103 H II 105d 106b H 19-23 111 116a BK I CH 19 136a 137a c / Phys s BK I CH [93 I-9] 269b / H n K CH 5 [71b1 13] 362c d / M ta physic BK H 9 [992b 4-993 I] 511a b K III CH 2 [996b26-997 4] 515b-d K V H 4 [006 4] 525a b CH 6 [I II 3 4] 530d BK XI CH 6 [063b7 I] 591d K XI I H 4 [78b28-3] 610b-c / Soul BK I CH 3 [407 22-3] 636d 637
9 ARI TOTLE Ge erat n f An mals K II CH 6 [742b 7-35] 283d 284 / Eth s BK V C 3 388b-c CH 6 389d CH 392c 393b
19 AQUIN Summa Th l g a PA T I Q 17 A 3 R 2 102d 103c Q 36 A 3 R 4 194c 195d ART II Q A 4 R 612a 613a
20 AQU N S Summ Theologi ART Q 94 A AN 221d 223 Q I 2 A 5 AN 359c 360c

5b(5) Demonstration in relat on to essence and existence demonstrations *propter quid* and *qu a*

5c Dialectical reasoning the opposition of ration l arguments

(5 *Reasoning in relation to knowledge opinion, and action 5c Dialectical reasoning the opposition of rational arguments*)

35 HUME *Human Understanding* SECT X DIV 86-91 488d-491c
42 KANT *Pure Reason* 1a b 36d 37d 108a d 120c 173a esp 129c 130b 133c 174b 177b 187a 192d 200c 209d 219a 220b 229b c 231c 232a / *Fund Prin Metaphysic of Morals* 260d 261b 283d 284d / *Practical Reason* 291a 292a 302a d 331c 337a c 340a 342d 348d 349a / *Science of Right* 407a 408b / *Judgement* 540a 546d 562a 578a esp 562d 564c 575b 578a 584c d
46 HEGEL *Philosophy of Right* PART II par 135 47b d
54 FREUD *General Introduction* 545d

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7 PLATO *Protagoras* 50d 52d 57a c / *Phaedrus* 115a 141a c esp 129d 141 c / *Meno* 176d 177a / *Gorgias* 252a 294d / *Timaeus* 457c / *Sophist* 558a 561a
8 ARISTOTLE *Prior Analytics* BK II CH 27 92a 93a c / *Posterior Analytics* BK I CH I [71 1 10] 97a / *Metaphysics* BK IV CH 5 [1009 16-22] 528c
9 ARISTOTLE *Ethics* BK I CH 3 [1094b23 27] 339d 340a / *Rhetoric* BK I 593a 622d esp CH I [355 4 b22] 594b 595a BK II CH 18 26 639a 653a c BK III CH 15 669d 670c CH 17 19 672a 675a c
10 GALEN *Natural Faculties* BK I CH 16 180c 181a
12 EPICTETUS *Discourses* BK I CH 5 110b c CH 8 113d 114
18 AUGUSTINE *Christian Doctrine* BK II CH 36-37 653d 654b BK IV C 1 4 676d 677a
19 AQUINAS *Summa Theologica* PART I Q 83 A I ANS 436d-438a PART I II Q 7 A I R P I 651d 652c
23 HOBBES *Leviathan* PART I 67c PART II 127d 128d
25 MONTAIGNE *Essays* 446d-450 453c-454d
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31 DESCARTES *Rules* X 16d 17a
33 PASCAL *Geometrical Demonstration* 440b-442
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36 STERNE *Tristram Shandy* 227a 228a
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42 KANT *Pref Metaphysical Elements of Ethics* 376c d
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43 MILL *Liberty* 284b-c
44 BOSWELL *Johnson* 209
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8 ARISTOTLE *Topics* BK III CH 1 4 162a 166b / *Metaphysics* BK VII CH 7 [1032b15 22] 555b d / *Soul* BK I CH 3 [407a22 23] 636d BK III CH 9 [432b26-433 5] 665c
9 ARISTOTLE *Motion of Animals* CH 7 [701 39] 236b d / *Ethics* BK I CH 3 [1094b12] 339d 340a CH 4 [1095 30-b13] 340c d CH 7 [1098 20 b8] 343c 344a BK II CH 7 [1107 32] 352d 353a BK X CH 1 [1172 34 b7] 426b c
12 EPICTETUS *Discourses* BK III CH 2 11 c 178d
23 HOBBES *Leviathan* PART I 53a 54a 60b 66c 68a 78a d
30 BACON *Advancement of Learning* 57d 81d 82a
31 DESCARTES *Discourse* PART III 48b 50b
33 PASCAL *Provincial Letters* 27a 80b 90a
42 KANT *Pure Reason* 60a-c 149d 150a 19 191a / *Fund Prin Metaphysic of Morals* 25 255d 260d 261b 264b 265b 266b d 27 c 277d 279d 283d 287d esp 283d 284d *Practical Reason* 291a 297c 298a 300a 300d [fn 1] 306d 307a 307d 321b esp 307d 309b 309d 310b 329a 337a c esp 329b d 33 343d 349b 350c / *Pref Metaphysical El ments of Ethics* 372b d / *Intro Metaphysic Morals* 383a d 388d 390b d 391a 393a *Science of Right* 398c 399c 416b-41 *Judgement* 461a-467a esp 463a-467a 596 598b
43 MILL *Utilitarianism* 445c d 456a 457b
53 JAMES *Psychology* 186a 381b 385b esp 38

5*e*(1) The form of the practical syllogism

8 ARISTOTLE *Soul* BK III CH 11 [434 6-2 667a
9 ARISTOTLE *Motion of Animals* CH 7 [70 39] 236b d / *Ethics* BK VI CH 9 391c 392b c [1142b20-26] 392a BK VII CH 3 [1146b 1147b19] 396d 398a passim
19 AQUINAS *Summa Theologica* PART I Q A 3 ANS and REP 2 430c-431d Q 86 A I 2 461c-462a
20 AQUINAS *Summa Theologica* PART I II Q A I ANS 141a c Q 77 A 2 REP 4 145d 14

5*e*(2) Deduction and determination in le thought

9 ARISTOTLE *Ethics* BK V CH 7 382c 383 10 385c 386b / *Politics* BK III CH 11 [128 6] 480b c C I 15 [1286 10-37] 484b-d CH [1287a23 28] 485d [1287b15 25] 486a b
20 AQUINAS *Summa Theologica* PART I II Q A 2 227c 228c A 4 229b 230c
23 HOBBES *Leviathan* PART I 86c 87b 9 96b esp 95c 96b PART II 130c 136b esp 13 164a c PART III 165
30 BACON *Advancement of Learning* 94d 95
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42 KANT *Pure Rea on* 149d 150a
43 MILL *Utilitarian sm* 445c-446b 456a-457b 475b d [fn 1]
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9 ARISTOTLE *Eth cs* BK III CH 2 [1110 28 35] 356a c 1 2-3 357b 359a BK VI CH I 2 387a 388b CH 5 389a-c pas m CH 7 [1141b8 21] 390c d c 1 8-9 390d 392b CH 12 [1144a6-37] 393d 394a
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23 HOB ES *Leviathan* PART I 53a 64a 65c 77d
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30 BACON *Ad ancement of Learning* 81d 95b
31 DESCARTES *D sc u e* PART III 48b 50b
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42 KANT *Pu e Rea on* 60a-c 169c 170a / *Fund Pri M taph) ic of Moral* 260d 261b 266b 267d 268b / *Practical Rea on* 327d 329a / *Science of Right* 398a 399c / *Judgement* 586a b 588b [fn 2] 595a d
43 M LL *Liberty* 276b 277a 294d 295b / *Ut l tar an sm* 456a-457b
46 HEGEL *Philosophy of Right* PART II par 122 44a
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7 PLATO *Pa men des* 486a 511d esp 491a c / *Sophist* 570a-d / *Seventh Letter* 809c-810d
8 ARISTOTLE *Metaphy c* BK IV CH 2 [004 25 31] 523b-c X VI CH I [10 5b1 8] 547b d BK IX CH 6 [1048a25 b9] 573 574 BK XI CI 3 [1061 10-18] 589b C I 7 [064 1-9] 592b
19 AQU NAS *S mma Th ologica* PART I Q I 3a 10c Q 2 A 2 11d 12c Q 32 A I REP 2 175d 178a Q 46 A 2 253a 255a
20 AQUINAS *Summa Theologica* PART II II Q 2 A 10 399b-400b PART III SUPPL, Q 75 A 3 REP 2 938a 939d
23 HOBBES *Le atl an* PART I 78d 79a 79d 80a PART II 163a b PART III 165b
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30 BACON *Ad ancement of Lea ning* 95d 101c
31 DESCARTES *Medit t ons* 60a 71a c / *Obj c t ons and Repl es* 119d 128a 129a
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40 GIBBON *D cline and Fall* 308c d
42 KANT *Pu e Reas n* 15c 16c 85d 88a 179c 182b 190a 200c 211c 218d esp 215d 216d / *Fund Prin Met phys c of Morals* 264d / *P a tical Reason* 293c 294b 351b 352c / *Pref M taphy cal Element of Ethics* 365a 366a / *Judgement* 600d 603d

6b Demonstration in mathematics analysis and synthe s

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8 AR TOTLE *Pr o Analytic* BK I CH 41 [49b 32 37] 68c / *P sterio Analytic* BK I CH I [71 11 16] 97a b CH 10 104d 105d esp [76b 39-77a2] 105d CH I 106c 107c CH 18 111b c BK II CH 9 [93b21 25] 128a b / *Top cs* BK V CH 4 [132 32 34] 183b BK VI CH 4 [141b3 22] 194d 195a BK VI C 3 [53a6-11] 208a b BK VIII CH [157a1-3] 213a / *Physic* BK II C I 9 [00 15 29] 277c d / *H avens* BK III CH 4 [302b27 3] 394a / *M taphysic* BK III CH 2 [996a1 36] 514d 515a [996b18-21] 515b BK V I C I I [1036 2-8] 559b-c BK IX C 9 [051a22 34] 577b c BK XI CH 3 [106 9-b3] 589c CI 4 589d 590a CH 7 [1 63b36-1064a9] 592b BK XIII CH 2 [1077b1 1] 608d 609a c 3 609a 610a
9 AR TOTLE *Generat n f Animals* BK II CH 6 [742b23 35] 283d 284a / *Eth s* BK I C I 3 [94b19 27] 339d 340a BK III CH 3 [1112b 20- 4] 358d BK VII CH 8 [151 15 19] 40 a
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43 MILL Ut l tarianism 445a 447b passim 461c 463d passim 475b d [fn 1]
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For Other comparisons of human and animal intelligence *see* ANIMAL 1c(2) LANGUAGE 1 MAN 1a–1c MEMORY AND IMAGINATION 6b MIND 3a–3b

Another discussion of the distinction between the intuitive and the discursive or rational *see* KNOWLEDGE 6c(1) and for the consideration of supra rational knowledge *see* EXPERIENCE 7 GOD 6c(3)–6c(4) HAPPINESS 7c(1)

The distinction and relation between reasoning and other acts of the mind *see* DEFINITION 5 IDEA 5a–5b 5e INDUCTION 1a JUDGMENT 1 7c KNOWLEDGE 6c(2) MEMORY AND IMAGINATION 6c SENSE 1c–1d

Other discussions bearing on the theory of the syllogism *see* HYPOTHESIS 5 IDEA 5a–5b JUDGMENT 7c LOGIC 1a OPPOSITION 1d(1) UNIVERSAL AND PARTICULAR 5d

The problems of truth and falsity necessity and contingency and certainty and probability in reasoning *see* NECESSITY AND CONTINGENCY 4e(2) OPPOSITION 1d(2) SIGN AND SYMBOL 4e TRUTH 3b(3)

An examination of immediate inference *see* JUDGMENT 7b and for the distinction between inductive and deductive reasoning and *a priori* and *a posteriori* reasoning *see* EXPERIENCE 2d INDUCTION 1b SCIENCE 5d

The elements of scientific reasoning *see* BEING 8d 8f CAUSE 5b DEFINITION 5 INFINITY 2c PHILOSOPHY 3c PRINCIPLE 3a(2)–3a(3) SCIENCE 5d–5e

The analysis of dialecti al and rhetorical reasoning *see* DIALECTIC 2b 2c(2) 3b–3c OPINION 2c OPPOSITION 1e RHETORIC 4c 4c(2)

Other discussions relevant to the study of practical reasoning *see* GOOD AND EVIL 5c JUDGMENT 2 KNOWLEDGE 6e(1)–6e(2) LAW 5g LOGIC 4e OPINION 6b PRUDENCE 5a 6b

The character of reasoning in the various disciplines *see* BEING 8f GOD 2b–2c IMMORTALITY 2 LOGIC 4a 4c 4e MATHEMATICS 3a 3c MECHANICS 2 MEDICINE 3c METAPHYSICS 2c PHILOSOPHY 3c THEOLOGY 4c WILL 5c

The general problem of the rationality of the universe *see* MIND 10a NATURE 3a WORLD 6c

ADDITIONAL READINGS

L t d b low re w ks ot clud d in *Gr t B k of th W ter W rld* but r l ant to the de a d t pics ith wh ch th h pter deals Th e wo ks a e d d d nt two g oups

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I

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Chapter 78 RELATION

INTRODUCTION

LIKE quantity and quality relation is generally recognized as a basic term or category But its meaning like theirs cannot be defined Relation is perhaps the prototype of an indefinable notion As Bertrand Russell points out it seems to be impossible to make any statement of what relation is without using the notion of relation in doing so

Any term which is essentially relative seems also to be incapable of definition Its meaning cannot be stated without referring to its correlative and since the meaning of the latter reciprocally involves the former as *its* correlative each member of a pair of correlative terms draws upon the other for its meaning A part is a part of a whole a whole a whole of parts Similarly the meaning of parent involves the notion of child and the meaning of child the notion of parent

Plato applies this maddening fact about correlative terms to all comparatives which presuppose the correlation of more and less Comparatives such as the hotter and the colder he writes are to be ranked in the class of the infinite They cannot be measured or defined Term like much and little great and small look like quantities but according to Aristotle they are not quantities but relatives for things are not great or small absolutely they are so called rather as the result of an act of comparison

Concerning quantities and qualities the ancients ask how they exist The alternatives seem to be either that they exist in and of themselves, or that they exist as the attributes of substances such as stones and trees But with regard to relations the question seems to be whether they exist rather than how they exist

The supposition that a relation cannot exist apart from the terms it relates may be thought to imply that the relation does exist when the terms it relates exist The ancients however do not appear to regard the relation as something having a reality distinguishable from the reality of the correlative terms It seems to be significant that both Plato and Aristotle discuss relative terms rather than relations as such For the most part they signify relations by using a pair of words which name things standing in a certain relation to one another

Thus in the *Categories* Aristotle refers to double and half master and slave greater and less or knowledge and object known as examples of correlative terms All relatives he says have a correlative Sometimes it is necessary to find the precise word or even to invent the right word for in order to indicate that a given term is relative its correlative must be appropriately named Concubine says Locke is no doubt a relative name as well as wife but in languages where this and like words have not a correlative term there people are not so apt to take them to be so as wanting that evident mark of relations which is between correlatives which seem to explain one another and not to be able to exist but together

When reciprocity of correlation does not appear to exist Aristotle suggests that it may be the result of our failure to use words carefully If we wish to use the term rudder a relative we cannot call its correlative a boat for there are boats which have no rudders Since there is no existing word it would be more accurate Aristotle thinks if we coined some word like ruddered to name the correlative of rudder Similarly in the case of slave as a relative term its correlative is not man understood in any sense but only man understood as master

The things which are designated by a pair of reciprocally relative terms must according to

Aristotle coexist One man cannot be called a master unless another man exists who can be called his slave something cannot be called larger unless something coexistent with it can be called smaller Aristotle considers possible exceptions to this principle of the simultaneity or coexistence of correlatives as for example in the case of knowledge and the knowable It seems possible he thinks for the knowable to exist before anyone has actual knowledge of it But the exception may be due to an improper naming of the correlatives If the correlative of knowledge is the known rather than the knowable then knowledge and its object may be said to be necessarily coexistent for nothing comes to be an object actually known except simultaneously with someone s coming actually to know it

THE COEXISTENCE OF things which are correlative to one another still leaves a question concerning the existence of the relation between them When conceived as an attribute a quality or a quantity can be said to exist in the thing it somehow modifies In the language of Aristotle such accidents *inhere in* substances and accordingly have reality as long as the substances in which they inhere exist But a relation does not seem to inhere in *a* substance It cannot be the attribute of a single thing It somehow lies between two things inhering in neither for if it belonged to either one alone it could have some reality if that one existed and the other did not The question therefore is whether relations really exist at all or are only in the mind of him who compares things or considers them relative to one another

A sign that the relative is least of all a substance and a real thing writes Aristotle is the fact that it alone has no proper generation or destruction or movement as in respect of quantity there is increase and diminution in respect of quality alteration in respect of place locomotion in respect of substance simple generation and destruction In respect to relation there is no proper change for without changing a thing will be now greater and now less or equal if that with which it is compared has changed in quantity

Plotinus also questions the reality of relations Has relation—for example that of right and left double and half—any actuality?

What can be the meaning of correlatives apart from our conception of their juxtaposition? Greater may refer to very different magnitudes different to all sorts of objects The comparison is ours it does not lie in the things themselves In the case of certain space and time relations he maintains that right and left are in our conception nothing of them in the things themselves Before and after are merely two things the relation is a ain of our making

Yet Plotinus seems unwilling to say that we do not mean anything by relation but are victims of words or that none of the relations mentioned can exist Recognizing what he calls the elusive character of relation he is willing to affirm the reality of relations when the actuality of the relationships is derived from no other source than relation itself He thinks that one quantity may be the double of another quite apart from our speech or thought The fact that one quantity is the double of another is an additional fact about the two quantities over and above all their other properties In all the conditions in which we assert relation Plotinus declares the mutual relation exists over and above the objects we perceive it as already existent our knowledge is directed upon a thing there to be known—a clear testimony to the reality of relation

The problem thus seems to become one of distinguishing between relations which have independent reality and those which exist only in the mind Some have said that relation is not a reality but only an idea But this Aquinas declares is plainly seen to be false from the very fact that things themselves have a mutual order and relation Not all relations are real however Relations which result in the things understood from the operation of the intellect alone are logical relations only inasmuch as reason observes them as existing between two understood things For example the relation of a thing to itself is not a real relation for reason by apprehending one thing twice regards it as two and thus it apprehends a certain relation of a thing to itself The same is true of those relations that follow upon an act of reason as genus and species and the like

Aquinas offers in contrast other relations which are realities with regard to both extremes as when a relation exists between two things according to some reality that belongs to both This is clear of all relations consequent upon quantity great and small double and half and the like for there is quantity in both extremes

This distinction between real and logical relations seems to be qualified by the intermediate case of a relation which is partly logical and partly real for according to Aquinas sometimes a relation in one extreme may be a reality while in the other extreme it is only an idea This happens whenever the two extremes are not of one order Since God is outside the whole order of creation and all creatures are ordered to Him and not conversely it is manifest that creatures are really related to God Himself whereas in God there is no real relation to creatures but a relation only in idea inasmuch as creatures are related to Him

In the *Charmides* Socrates raises some doubts about the admissibility of reflexive relations or the relations of things to themselves Others have questioned the partly real and partly logical relation according to which one thing is related to another but the second is not related to the first But the more important issues in the tradition of western thought seem to be whether there are both real and logical relations *i e* relations both in nature and in the mind and whether in either case relations enter into the very nature of the things related or are merely external so that the character of a thing is unaffected by the relations in which it stands

AS INDICATED IN THE chapters on JUDGMENT REASONING and LOGIC relation tends to displace predication in certain typically modern theories of the proposition and of inference What is currently called relational logic is set against subject predicate logic Relations themselves without regard to the character of the terms related become the primary object of logical analysis It is said for example that the proposition John hit James has the form aRb or R(a b) and that the proposition John went to school with James has the form R(a,b c) The first is a dyadic relation the second a triadic relation

Relations are classified not only with respect to the number of the terms they relate but also with respect to such formal properties as symmetry transitivity reflexivity The relation of parent and child for example is asymmetrical It cannot be said if A is the parent of B that B is also the parent of A whereas the relation of brotherhood is symmetrical Statements of symmetrical relationship are convertible If we say that A is the brother of B we can also say that B is the brother of A

The type of relationship remains the same regardless of the character of the terms Unequal quantities are asymmetrically related equal quantities symmetrically to the right of is an asymmetrical spatial relation next to is symmetrical in time simultaneous with is symmetrical and prior to asymmetrical The distinction between transitive and intransitive relations similarly holds for all kinds of terms The relation of father to son or of standing next to in space is intransitive for if A is the father of B and B the father of C A is not the father of C whereas the spatial relation of standing to the right of is transitive for if A is to the right of B and B to the right of C then A is to the right of C

The modern analysis of propositions as relational structures which differ in type according to the character of the relations not the character of the terms has an antecedent in Locke s analysis of judgments as acts of comparison which look to the relation between ideas rather than to the ideas themselves Both analyses lead to a theory of inference which is based on the *convertibility* of symmetrical relations and on the *transitivity* of certain relationships and the intransitivity of others As indicated in the chapter on REASONING the factor of transitivity appears in William James discussion of the principle of mediate comparison He states this in the formula *more than the more is more than the less* Then he explains that such a formula would cover all possible cases as earlier than early is earlier than late worse than bad is worse than good east of east is east of west etc. etc *ad lib tum* Symbolically we might write it as $a<b<c<d$ and say that any number of intermediaries may be ex

punged without obliging us to alter anything in what remains written

James thus formulates what he regards as the most fundamental law of thought For series of homogeneously related terms the law is that *skipping intermediary terms leaves the relations the same* The factor of transitivity enters the picture when James distinguishes between relations which are and relations which are not *transferable* All skipping of intermediaries and transfer of relations occurs within homogeneous series he writes But not all homogeneous series allow of intermediaries being skipped It depends on which series they are on what relations they contain Let it not be said that it is a mere matter of verbal association due to the fact that language sometimes permits us to transfer the *name* of a relation over skipped intermediaries and sometimes does not as where we call men progenitors of their remote as well as of their immediate posterity but refuse to call them fathers thereof There are relations which are *intrinsically* transferable whilst others are not The relation of *condition* e g is intrinsically transferable What conditions a condition conditions what it conditions— cause of cause is cause of effect The relations of negation and *frustration* on the other hand are not transferable what frustrates a frustration does not frustrate what it frustrates No changes in terminology would annul the intimate difference between these two cases

THE FOREGOING PASSAGES from James reflect the general tenor of the theory of the calculus of relations He himself does not systematically expound it Its elaboration is to be found in the writings of Boole Couturat and De Morgan of Jevons Pierce Bradley Royce Russell and Whitehead (whose works are cited in the Additional Readings) Is this relational logic more general than the subject predicate logic that is traditionally called Aristotelian or is the reverse th case?

The modern answer insists upon the greater generality of relational logic Royce for example defining subsumption as a non symmetrical transitive relation which obtains between two classes when one includes the other declares that the entire traditional theory of the syllogism can be expressed as a sort of comment upon and relatively simple application of the transitivity of the subsumption relation. According to Royce William James axiom of skipped intermediaries represents a step in the right direction but it fails to achieve complete generality

Russell disposes of the traditional theory of the proposition in the same fashion that Royce disposes of the traditional theory of the syllogism Traditional logic he writes believed that there was only one form of simple proposition (i e of proposition not stating a relation between two or more other propositions) namely the form which ascribes a predicate to a subject It is therefore unable to admit the reality of relations all relations it maintains must be reduced to properties of the apparently related terms Russell insists on the contrary that propositions stating that two things have a certain relation have a different form from subject predicate propositions. This can be most easily seen he thinks in the case of asymmetrical relations The proposition which states that A and B are related by the symmetrical relation of equality can be interpreted to mean that A and B both possess a common property But when we come to asymmetrical relations such as before and after greater and less etc the attempt to reduce them to properties becomes in Russell s opinion obviously impossible The relational theory of the proposition therefore includes the subject predicate theory as a special case

A defense of the subject predicate logic would not make the counterclaim that relational logic can be treated as a special case Rather it would insist that the two logics are radically different in principle—that the one belongs to a philosophy of nature and a metaphysics in which substance is the primary concept whereas the other belongs to the empirical sciences and to modern mathematics in which the concept of relation supplants substance Whichever side of the controversy is taken the undeniable difference between a relational and a subject predicate logic represents one of the great differences between modern and ancient thought

It is not only in logic that the modern emphasis seems to be upon relations rather than

upon things related—on relations denuded of their terms rather than on terms treated as correlatives The same tendency appears in modern mathematics in algebra in the cal culus and especially in the theory of equations and functions of sets and series It also appears in modern physics where according to Cassirer the great conceptual revolution consists in dis placing substance by function and the casual interaction of substances by functional rela tionships and systems of order Such substitu tions obviously parallel the shift in logic—from the consideration of terms related as subjects and predicates to the consideration of rela tions without regard to differences in the terms related

In the tradition of the great books this con ceptual revolution seems to be announced by the treatment which Hume and Kant accord to the notion of substance Hume appears to conceive of experience as a series of events related as he says by only three principles of connexion namely *Resemblance Contiguity* in time or place, and *Cause or Effect* These relations make up the fabric of experience So long as it consisted in such connections our experience would be the same whether or not there were enduring things or substances

Nature has established connexions among particular ideas Hume writes so that no sooner does one idea occur to our thoughts than it introduces its correlative All our knowl edge of matters of fact depends upon the asso ciation of ideas or the relations of resemblance contiguity and causation among the elements of experience All other knowledge has for its object those relations between ideas which do not connect them causally or place them in a spatial or temporal order In either case rela tions of all sorts rather than things and their properties (or substances and their attr butes) seem to be the prime constituents of nature and of knowledge

Kant presents a fourfold classification of judgments according to their quantity quality relation and modality Under the head of rela tion he distinguishes the categorical the hypothet cal and the disjunctive according to the following criteria *a* Relation of the pred icate to the subject *b* Relat on of the cause to its effect *c* Relat on of subdivided knowledge and of the collected members of the subdivision to each other These are he writes all the relations of thought in judgements

Pointing out that he borrows the term from Aristotle Kant calls the pure concepts of the understanding categories and constructs a table of categories which runs parallel to his table of judgments because as he explains the same function which imparts unity to various representations in one judgement im parts unity likewise to the mere synthesis of various representations in one intuition which in a general way may be called the pure con cept of understanding Kant s categories in contrast to Aristotle s afford a striking example of the shift from substance to relation

Where for Aristotle substance is the primary category and all other categori s signify the accidents of substance among which relation seems to have least reality in the nature of things Kant makes relation one of the four major groups of categories and under relation places subsistence and inherence (or substance and accident) along with causality and depend ence (or cause and effect) and community (or reciprocity between the active and the passive) It is not substance but the relation of substance and accident which is for Kant a transcen dental category

THE ISSUE CONCERNING substance and relation takes another form in the problem whether relations exist *in* the very nature of things as belonging to their essence or only exist as connections *between* things In the latter al ternative there is still the question whether relations between things are externally affixed to them or are internally inherent in them and affect the natures of the things related

Accord ng to the Christian doctrine of the Trinity there are real relations *in* God each really distinct from the others yet each iden tical with the divine essence These relations are the persons of the Trinity—the relations Aquinas calls paternity filiation spiration and procession the relation of the Father and the Son and of the Holy Sp rit to tl em both Relation in God he writes is not s an acc dent in a subject but s the div ne sence itself and so t is sub t nt for the d vine essence is sub stent Th fore a the Godhead

is God so the divine paternity is God the Father Who is a divine person Therefore a divine person signifies a relation as subsisting

Since the three persons of the Trinity are of the same essence the principle of their real distinction must be found elsewhere Denying that there can be discerned between them a real distinction in respect of the divine essence Descartes does not reject the possibility of a distinction in respect of their relation to one another Aquinas considers two principles of difference among the divine persons *origin* and *relation* but thinks it is better to say that the persons or hypostases are distinguished by relations rather than by origin for among other reasons when a relation is an accident it presupposes the distinction of subjects but when the relation is subsistent it does not presuppose but brings about distinction

It would seem to follow that except in God relations are not subsistent In Aristotle s theory of corporeal substances for example the matter and the form which constitute a physical thing are united not related Though matter and form are conceived as really distinct principles in the composition of a composite substance—as essence and existence are also sometimes said to be really distinct principles in the being of all things except God—their real distinction does not imply that they are subsistent as are the persons of the Trinity nor that they are relations or in relation to one another If real as opposed to logical relations occur only between things which somehow really subsist then those principles which must be united in order for a thing to subsist cannot be really related to one another

WITH A SOMEWHAT different analysis Locke seems to exclude relations from the constitution of what he calls the complex idea of substance All complex ideas according to Locke are either modes substances or relations The complex idea of substance is a collection of those several simple ideas of sensible qualities which we find united in the thing called horse or stone yet because we cannot conceive how they should subsist alone nor one in another we suppose them existing in and supported by some common subject which support we denote by the name substance though it be certain we have no clear or distinct idea of that thing we suppose a support

The various simple ideas of qualities which together with the indistinct notion of a supporting substratum constitute the complex idea of a particular substance are in Locke s theory compounded not related Relation is itself a complex idea consisting in the consideration and comparing of one idea with another The ideas related may be either simple or complex but the relations are *between* ideas not *in* them—certainly not in simple ideas nor in complex ideas of modes and substances which are combinations not relations of simple ideas

The exception is of course a complex idea of relation which involves several distinct ideas and in addition the idea of a relation between them which Locke says it gets from their comparison one with another Since any idea whether simple or complex may be the occasion why the mind thus brings two things together any of our ideas may be the foundation of relation but Locke adds there must always be in relation two ideas or things either in themselves really separate or considered as distinct and then ground or occasion for their comparison

Locke s theory of relations not only seems to exclude them from the interior constitution of substances but also seems to make them entirely extrinsic to the natures of the things related Ideas of relation Locke says may be the same in men who have far different ideas of the things that are related or that are thus compared The relation is unaffected by the things it relates as they in turn are unaffected by it for they are not contained in the real existence of things but [are] something extraneous and super induced

Berkeley and Hume also seem to agree that relations are entirely external *Relations* are distinct from the ideas or things related writes Berkeley inasmuch as the latter may be perceived by us without our perceiving the former To Hume all events seem entirely loose and separate One event follows another but we can never observe any tie between them They seem *conjoined* but never connected So far as our understanding goes nothing in the nature of one event necessarily

leads the mind to the consideration of another as it would if the event could not be under stood by us except as intrinsically related or connected with that other

In the tradition of western thought the issue concerning the internality or externality of relations has profound implications for man s conception of the order of nature or the struc ture of the world The difference discussed in the chapter on CHANCE between what William James calls the block and the con catenated universe presupposes not only dif ferent views of causality but also different positions with respect to the internality or ex ternality of relations as is indicated by James criticism of Hegel and Bradley

The relation of part and whole and of one part to another in the structure of an organic whole seems to be the prime example of in ternal relationship Each part is thought to be constituted both in its being and nature by the being and nature of the whole to which it belongs and by the other parts which comprise that whole This may be seen in Spinoza s theory of God or Nature as the one and only substance in and through which everything else both is and is conceived All things are locked together in a system of internal relation ships—the finite parts with one another through the infinite whole which determines each to be what it is in itself and in relation to all others

RELATION SEEMS TO BE the principle of order At least it can be sa d that the various concep tions of order which appear in the great books involve the idea of relation and of different kinds of relationship

The order of the universe or of nature for example seems to be differently conceived according as things are causally related to one another related as lower and h gher species in a hierarchy of grades of being or as the parts of one all emb acing whole In each case it makes a difference as we have already ob served whether the relations involved are thought to be real or logical and internal or external to the th ngs r lated

Relation sim larly ente s into conceptions of psychological political and moral ord r—the order of the parts of th soul the order of classes or funct ons in the state th order of goods of means and ends of duties of loves Just as the status of each thing in nature is affected by whether the universe is conceived as a whole of internally related parts or as a set of externally related wholes so the status of the individual in society is affected by whether the state is conceived as an organic whole or merely as a political order formed by the free association of individuals

The consideration of the various types of order occurs in other chapters such as NATURE WORLD SOUL STATE GOOD AND EVIL and BEAUTY Particular types of relationship are also discussed in chapters concerned with the terms between which such relationships hold—the relation of cause and effect in the chapter on CAUSE spatial and temporal relationships in the chapters on SPACE and TIME the rela tion of species and genus in the chapters on EVOLUTION and IDEA relations of equality and inequality in the chapter on QUANTITY and re lations of similarity and dissimilarity in the chapter on QUALITY

This last type of relationship more broadly conceived as including not merely likeness in quality but the sameness or similitude of things in every sort of respect is the main con sideration of the chapter on SAME AND OTHER The theory of analogy is d scussed there also for though it is concerned with relation—a pro portion being a ratio of ratios—the specific relationship by which relations are themselves related in analogies or proportions seems to be one of similitude (either identity or similarity)

Finally the idea of relation seems to be in volved in the contrast between the absolute and the relative Things are said to be con sidered absolutely when they are cons dered in themselves and relatively when they are con sidered with reference to something else By extension of these meanings relativ sm tends to assert that with regard to most things if not all wh t they are depends on the point of v e v i e their relation to man to *this* group of men or even to *this* man Absolutism goes to the opposite extreme of saying that things are what they are independently of man s v w of them The oppos t on of these two tenden s cre tes familiar ues concern ng the true the good and the beaut ful wh ch ar discussed in the chapters d vot d to tho ubjects

OUTLINE OF TOPICS

1 The general theory of relation

1a The nature and being of relations the distinction between real and logical or ideal relations

1b The effect of relations on the nature and being of things internal and external relations

1c The coexistence of correlatives

1d Relational unity or identity of relation the notion and use of analogy or proportionality

2 Order and relation in God the divine processions and the relations constituting the Trinity of persons

3 The relation of God to the world divine immanence and transcendence

4 Relation in the order of thought or knowledge

4a The definability or indefinability of relative terms

4b The proposition or judgment as a statement of relation relation in reasoning

4c The transcendental categories of relation

4d Relations as objects of knowledge ideas of relation

4e The relations between ideas

4f The types of relationship underlying the association of ideas in thought memory and dreams

5 Order as a system of relationships or related things

5a The nature and types of order inclusion and exclusion succession and coexistence priority posteriority and simultaneity

(1) The order of the causes or of cause and effect

(2) The order of goods or of means and ends the order of loves

(3) The order of quantities the types of proportion

(4) The order of kinds hierarchy species and genus

5b The order of the universe or of nature the hierarchy of beings

5c Order as a principle of beauty

6 The absolute and the relative modes of consideration

6a Absolute and relative with respect to space time motion

6b Absolute and relative with respect to truth

6c Absolute and relative with respect to goodness or beauty

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbe s of the passages referred to For example in **4** HOMER *Il ad* BK II [265 283] **12d** the number **4** is the number of the volume in the set the number **12d** indicates that the pas sage is in section d of page 12

PAGE SECTIONS When the text is printed in one column the letters a and b efer to the uppe nd lo ver halves of the p ge For example in **53** JAMES *Psych l gy* **116a 119b** the pa sage begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two col mns the l tters a and b refer to the upper and lower halves of the left hand s de of the page the letters c and d to the upp and lo ver halves of the right hand s de of the page For exampl in **7** PLATO *Sympos um* **163b 164c** the passage b gins in th lower half of the left hand s de of page 163 and ends in the upper half of the r ght hand de of page 164

AUTHOR S DIVISIONS One or more of the main d isions of work (such as PART K CH SECT) are sometimes included in the reference line numbe s in brackets are g ven in c r tain cases *e g Il ad* BK II [65 83] **12d**

BI E R FERENC The ref rences are to book chapter and verse When the Ki g James and Douay vers ns differ in title of books or in th numbering of chapters or vers s the King James version cited fir t and the Douay indicated by a (*D*) f llo s *e g* OLD T STA MENT *Neh miah* 7 45—(*D*) *II Esd as* 7 46

SYM O S The abbr viation sp calls the reader s ttention to one or more esp c ally relevant part of a whole reference pass m signifies that the t p c is discussed int rmit tently ather than c ntinuously in the wo k or passag cited

Fo additi nal inf mation concerning the style of the references s e the Explanat on of Refere ce Style f gener l guidan e in the use of *The Gr t Ideas* c nsult the Prefa e

1 The general th ory of relation

1a The n ture and being of rel t ons the d unction between re l and logical or d l el t ons

7 PLATO *Ch rm d s* **8d 9d** / *Cratylus* **86d** / *Pha d* 242 245d / *Republ* BK V **372d 373b** / *Timaeu* **448b-449** / *Parm des* **489 c** / *S ph t* **570a 574** / *Stat sman* **594a b**

8 AR TOTLE *Catego i* CH 7 11 **13d** / *Phy ics* BK I CH I [o^b 9-32] **278b** K V CH 2 [2 5^{b}1 13] **305d** / *M t phys s* BK I CH 9 [990^{b}9-17] **508d** K V H 15 **542 543** K XIV CH I [1088 15 ^{b}4] **620b d**

9 ARISTOTLE *Ethi s* BK I CH 6 [96 17 29] **341b**

17 PLO INU *S xth Enne d* TR I CH 6-9 **254d 257a**

19 AQU NA *S mma Th ol g a* PART Q 6 A 2 RE **28d 29** Q 13 A 7 **68d 70d** Q 28 AA I 2 **157 160a** A 4 AN nd RE 3 4 **160c 161d** Q 4 A 2 R 4 **214b-215b** Q 4 A I RE 4 **224b-225d** Q 45 A 3 R P 3 **244 d**

20 AQUIN S *S mm Th log* PART I II Q 49 A I ANS **1b 2b** PART I Q 2 A 7 REP 2 **718b-d**

31 D CART S *Rules* VI **8c**

35 LOCKE *Human Under t d ng* BK II CH XXV **214d 217a** CH XXX S CT 4 **238d 239a**

35 BERKE Y *Human K owl dge* CT 415 SECT 89 **430**

42 KANT *Pure R a on* **41 45b** esp **42c 43d 44c 61a 64a** esp **62d 63 72c 85d** esp **72 74b 99a 108a** / *Pract l Reaso* **339a b**

46 H GEL *Ph lo ophy f H st y* INTRO **156b**

53 JAMES *P ychology* **157b 159b** esp **158b 159b 458a 459b 549a 550b 863b** [fn 2] **865b 866a 873a b 879b 886a** pass m esp **880b-882a 884b 885 889 890a**

1b The effect of elat on on th n ture nd be ng of thing nternal and extern l l t ons

7 PLA O *Tl ea tetu* **521d 522b**

8 A ISTOTL *Categories* CH 7 [S ^{b}24] **13a d** / *Phy ics* BK V CH [2 5^{b}1 3] **305d** / *Met physi s* BK X H 12 [68 10-16] **596d 597a** BK X V C I I [88 15 4] **620b d**

19 AQUINA *Summa The l g a* PART I Q 3 A 7 **68d 70d** Q 8 AA **157 160** Q 30 A RE 3 **167 168** Q 4 A 2 P 3 4 **214b-215b** Q 44 A R **238b 239a** Q 45 A 3 **244a d**

(1 *The general theory of relation 1b The effect of relations on the nature and being of things: internal and external relations*)

20 AQUINAS *Summa Theologica* PART III Q 2 A 7 REP 2 718b d PART III SUPPL Q 79 A 2 REP 2 953b 955c
31 SPINOZA *Ethics* PART I AXIOM 5 355d PROP 2 3 355d 356a
35 LOCKE *Human Understanding* BK II CH XXV SECT 4-5 215c d BK IV CH VI SECT II 334b-335b
42 KANT *Pure Reason* 99a 101b
46 HEGEL *Philosophy of Right* PART I par 74 31d / *Philosophy of History* PART I 220c
53 JAMES *Psychology* 142a b 458-459b 550b 551b [fn 2] 640b [fn 1] 644b 645a 660a b 669a

1c The coexistence of correlatives

7 PLATO *Charmides* 8d 9d / *Gorgias* 267c 268a / *Republic* BK IV 351b 352b / *Theaetetus* 520a b 521b 522b
8 ARISTOTLE *Categories* CH 7 [6b26-8 12] 11b 13a CH 10 [11b23 33] 17a / *Topics* BK V CH 6 [135b 7 26] 187b c BK VI CH 4 [14 22 33] 195c d
9 ARISTOTLE *Rhetoric* BK II CH 19 [1392b3 4] 640a
10 GALEN *Natural Faculties* BK CH 4 169a
17 PLOTINUS *Sixth Ennead* TR I CH 7 255d 256a
19 AQUINAS *Summa Theologica* PART I Q 13 A 7 REP 6 68d 70d Q 40 A 2 REP 4 214b-215b
35 LOCKE *Human Understanding* BK II CH XXV SECT 2 215b c SECT 5 215d
42 KANT *Pure Reason* 83b 84d
46 HEGEL *Philosophy of Right* PART I par 7 31c par 74 31d

1d Relational unity or identity of relation the notion and use of analogy or proportionality

7 PLATO *Gorgias* 267c 268a / *Timaeus* 448b d
8 ARISTOTLE *Posterior Analytics* BK I CH 10 [76 30-b] 105 BK II CH 14 [98a20- 3] 134a CH 17 [99 16] 135a b / *Topics* BK CH 7 [108a6-14] 152b BK IV CH 4 [124 5 0] 1 2d BK V CH 7 [136b33 37a20] 189a c CH 8 [138b 23 7] 191b-c / *Physics* BK CH 7 [191 8 2] 266d BK VI CH 4 [49a2 24] 332b / *Generation and Corruption* BK I CH 6 [333 7 34] 434a / *Meteorology* BK IV CH 9 [387b -6] 491c / *Metaphysics* BK V CH 6 [6b32 1017 3] 537c CH 9 [1018 12 13] 538d BK V CH II [1037a5-9] 560c BK X CH [046 4-8] 570d 571a CH 6 [1048 3 8] 573d 574a BK X CH 4-5 599d 601a passim / *Soul* BK III CH 7 [431a20-b1] 663d 664a CH 8 [431b20-432a2] 664b-c
9 ARISTOTLE *History of Animals* BK I CH I [486 15-487a1] 7b-d BK VIII CH I [588a18-b5] 114b d / *Parts of Animals* BK I CH 4 16 d 168c CH 5 [645b1 33] 169b-d / *Generation of Animals* BK I CH I [715b17 26] 255d BK II CH 10 [760 9-17] 301b / *Ethics* BK I, CH 6 [1096b27 29] 342a BK V CH 3-5 3 8c 381d passim BK VIII CH 7 [1158b29 33] 410d / *Politics* BK V CH I [1301b29-36] 503a / *Rhetoric* BK I CH 2 [1357b 5 1358a-] 597 d BK II CH 20 [1393a22 1394 8] 640d 641d BK III CH 4 657b d CH 10 662c 663d CH 1 [1412b33 1413 13] 665c d / *Poetics* CH 21 [1457b6-33] 693a-c
11 EUCLID *Elements* BK V 81a 98b esp DEFINITIONS 3-6 81a BK VII DEFINITIONS 20 12 b
11 NICOMACHUS *Arithmetic* BK II 841c-d
16 KEPLER *Harmonies of the World* 1078b-1080a
19 AQUINAS *Summa Theologica* PART I Q 4 A 3 22b 23b Q 5 A 6 REP 3 27c 28b Q 12 A 1 REP 4 50c 51c Q 13 AA 5-6 66b 68- A 10 72c 73c Q 14 A 3 REP 2 77d 78b Q 16 A 6 A 5 98b d Q 33 A 3 ANS 182c 183c Q 44 A 3 ANS 240b 241a Q 54 A 3 ANS and REP 2 286c 287b Q 66 A 2 ANS 345d 347b Q 93 A 1 REP 3 492a d PART I II Q 20 A 3 REP 3 713c 714c Q 7 A 3 REP 2 738c 739c
20 AQUINAS *Summa Theologica* PART I II Q 6 A 1 REP 1 54d 55c PART III Q 60 A 1 A 5 847b 848a PART III SUPPL Q 69 A 1 REP 2 885 886c Q 92 A REP 6 102 c 1032b
24 RABELAIS *Gargantua and Pantagruel* BK I 12d 13b
28 HARVEY *On Animal Generation* 336b-d 449a b 469d 470 I
30 BACON *Novum Organum* BK II APH 27 15 b-158d
31 DESCARTES *Objections and Replies* 158b-161d
35 LOCKE *Human Understanding* BK II CH XXVIII SECT I 228c
35 HUME *Human Understanding* SECT IX DIV 82 487b c
42 KANT *Pure Reason* 72c 74b / *Judgement* 601d 603a
49 DARWIN *Origin of Species* 212d 213c
53 JAMES *Psychology* 688 689b passim

2 Order and relation in God the divine processions and the relations constituting the Trinity of persons

18 AUGUSTINE *City of God* BK X CH 24 312d 313c BK XI CH 10 327d 328d
19 AQUINAS *Summa Theologica* PART I Q 3 14a 20c Q II AA 3 4 49a 50b Q 28 157c 161d Q 29 A 4 165c 167a QQ 30-1 167 217c passim Q 41 A 5 222b-223b Q 42 224a 230a
21 DANTE *Divine Comedy* PARADISE XXIV [1-147] 144a XXXIII [76-145] 157a d

22 CHAUCER *Second Nun s Tale* [5 794-809] 467a b
23 Ho ES *Leviathan* PART I 97 ART III 207b 207d 208c PART IV 259d
31 DESCARTES *Meditati s* v 93 96a / *Objec t ons and Replies* POSTULATE V 131b c 159b 161d 217d 218b 232b
31 S NOZA *Eth cs* PART I D I 355a DEF 3-6 355b D 8 EXPL 355c PROP 7 356c PROP 10-11 358a 359b PROP 15 D IONST 360a PR 17 SCHOL 362c 363c PROP 20 363d 364a PROP 23 364d 365a RO 29 SCHOL 366b c PRO 32 COROL 367b PRO 33 SCHOL 2 367d 369a
32 M LT N *Parad e Lost* BK II [56-415] 136b 144b esp [315 34] 142a b [383-389] 143b-144a BK V [600-615] 188b BK X I [469-55] 329b 331a
40 G BBON *D cline and F ll* 307b 310b 313b esp 310b-311d
41 GI ON *D cl e and Fall* 422a c 521c
46 HEG L *Ph los phy of H story* PART III 306a c

3 The relation of God to the world d ine immanence nd tran cendence

18 AU USTIN *Co f s ions* BK I par 2-3 1b 2a K II p r o 15b-d K IV par 26 25c d par 31 26c 27 BK VI p r 4 36 b BK VII par 2 43b-44a par 7 45a d par 17 49a p r 21 49d 50a K X par 8-10 73b 74a BK XI p r 7 100d 101a p r 21 103d 104a / *City of God* BK VII CH 6 248a H 30 261b d BK XII CH 2 343 d CH 17 353a 354a CH 25 358b-359a BK X X CH 13 519a 520a / *Ch i an Do t ine* BK CH 12 627c d CH 32 633 d
19 AQU NA *Summa Tl eol gica* PART I Q 3 A 8 19d 20c Q 6 A 2 REP I 28d 29c Q 8 34c 38 Q 13 A 7 68d 70d Q 18 A 4 107d 108c Q 26 A I R P 3 157 158d A 4 ANS 160c 161d Q 44 A I REP 238b 239a Q 45 A 2 REP 2 242d 244a A 3 244a d Q 5 A 3 RE 3 277 278c Q 52 A ANS 279b 280a Q 61 A 3 RE 316 d Q 103 A CONTRARY and ANS 529 530a Q 104 A I 534c 537b ART I Q 17 A 8 REP 692a c
20 AQUINAS *Summa The logica* PART II Q 28 A 2 R P 3 511a d
21 D NT *D i e C m dy* ARAD SE II [II 48] 109a b XI [52-66] 126a XIX [40-66] 135c d XXVIII 148d 150b XX X [127 145] 151 d XXX II [76-93] 157a
28 HARVEY *On An mal Generation* 428c d
31 DESC RTES *Disco* RT V 52a d / *M ditations* I 87b-88c / *Object s nd Repl es* 110b-112a 158b-159a 213b-d 214a d
31 S O A *Eth cs* PART I 355a 372d esp D 3-6 355b AX OM I 2 355c OP -8 355d 357d RO IO H L 358 b PROP 7

SCHOL 362c 363c, PROP 24 30 365a 366d PROP 33 SCHOL I-2 367c 369a PART II PROP I II 373d 377
32 M TON *Parad s Lost* BK XI [334 346] 306b
34 NEWTON *Principles* BK III GEN RAL SCHOL 370a 371a
35 LOCKE *Human Unde tand ng* K II CH X I S CT 18 152a c CH XV S CT 12 165b-
35 BERKEL Y *Human Knowledge* CT 149-150 442d-443b SECT 155 444b-c
35 HUM *Human L der tand ng* S CT VII DIV 56 475a b
42 KANT *Pu e Reason* 192c d / *P actical Rea son* 334b 335b / *Judgem nt* 566c d 580c d 592a c
46 HEGEL *Ph losophy f History* RT I 220c 221a 224a b 246c 247a P RT III 306a c PART IV 322a-c 349b-350a

4 Rel t on in the order of thought or knowl edge

4a The defin b lity or ind fin bility of relati e terms

7 PLATO *Philebus* 615 616c
8 ARISTOTLE *Catego i* CH 7 [6 36-7b 4] 11a 12b [8 12 b24] 13a d / *Top cs* BK IV CH [120b36-12 6] 168d CH 4 [4b15-34] 173c d [5 14-b14] 174a BK VI CH 4 [142a22 33] 195c d H 5 [142b3 143 12] 196b CH 6 [145 12-b20] 198d 199b CH 8 200b-201a CH 9 [147a23 3] 201b H 12 [149b4 -3] 203d 204a / *S ph stical R futa tions* CH 13 238d 239a CH 31 250c d
19 AQUINAS *Summa Th olog a* PART Q 44 A I REP 238b 239

4b Th propo t on or j dgment s a st te ment of rel t on rel t on in r soning

35 LOCKE *Huma Understand g* BK V CH S CT I-7 307a 308a esp SECT 7 307d 308a CH X I SECT 6-8 360a c
35 HUME *Human Understa ding* S T IV DIV 458a b
42 KANT *Pur Re on* 39c-41c esp 40c d 51d 52b
53 JAM S *P ychology* 174b 176a 213b 214a p 214b [fn I] 302b 304b 638b 640b [fn] 869a 874a p ssim esp 870b 871a 878a 879b 889a

4c The tr n cendent l catego s of relation

42 KANT *Pu Reaso* 41c 45b esp 42c 43d-44c 61a 64a esp 62d 63c

4d Relation as objects of knowledg id s of relat on

7 PLATO *Ph do* 242 245d / *R publ c* BK VII 392b 393b
8 A T TL *C teg r* CH 7 11a 13d / *Meta phy ic* K C 9 [990b9-1] 508d

4 Relation in the order of thought or knowledge
4d Relations as objects of knowledge ideas of relation)

4e The rel tions between ideas

4f The types of relat onsh p underlying the ssociat on of ideas in tho ght memory and d eams

5 Order as a system of relationships or rel ted things

5a The nature and types of order i cl s on and exclusion succession a d coexist ence priority posteriority and simul taneity

5a(1) The order of the cause or of cause and effect

(5a *The nature and types of order: inclusion and exclusion, succession and coexistence, priority, posteriority, and simultaneity*)

5a(2) The order of goods or of means and ends: the order of loves

OLD TESTAMENT: *I Kings*, 3:5-14—(D) *III Kings*, 3:5-14

NEW TESTAMENT: *Matthew*, 13:44-46 / *Philippians*, 3:7-16

6 HERODOTUS: *History*, BK I, 6c-8a

7 PLATO: *Lysis*, 23a-c / *Euthydemus*, 69a-71a / *Symposium*, 165b-167d / *Meno*, 183b-184c / *Gorgias*, 262a-264b / *Republic*, BK II, 310c-d; BK VII, 401b; BK IX, 421a-427b / *Timaeus*, 465d-466a / *Philebus*, 635b-639a,c / *Laws*, BK I, 643c-644a; BK II, 656d-658c; BK III, 674b; BK V, 687c-688c; 689c-690c; 694d-695a; BK IX, 751c

8 ARISTOTLE: *Posterior Analytics*, BK II, CH 22 [68 25-b8] 89d-90a / *Topics*, BK III, CH 1-4 162a-166b / *Metaphysics*, BK V, CH 2 [1013 32-b3] 533c; [1013b25-28] 533d-534a

9 ARISTOTLE: *Ethics*, BK I, CH 1-2 339a-d; CH 4 [1095 3-29] 340b-c; CH 5 [1095 13]; CH 7 [1097b22] 340d-343a; BK I, CH 8 354a-d; BK VI, CH 11 14 403c-406c; BK X, CH 6-7 430d-432c / *Politics*, BK I, CH 1 [1252 1-6] 445a; BK I, CH 12 480-481b; BK I, CH [3-3 2-b2] 527a-c; CH 13 [1331b24-38] 536b; [1332 8-27] 536d-537a; CH 14 [1333 7-37] 538b / *Rhetoric*, BK I, CH 7 604c-607d

12 EPICTETUS: *Discourses*, BK II, CH 19 163a; BK I, CH 14 189d

12 AURELIUS: *Meditations*, BK V, SECT 16 271c-d

14 PLUTARCH: *Solon*, 74c-75c / *Pericles*, 122a

17 PLOTINUS: *First Ennead*, TR IV 12b-19b esp CH 2-7 12d-16a; CH 14-16 18a-19b / *Second Ennead*, TR IX, CH 15 74d-75b

18 AUGUSTINE: *Confessions*, BK II, par 10-14 11-12b / *City of God*, BK VIII, CH 8-9 270-271a; BK X, 6 331a-c; BK XII, CH 8 346d-347b; BK XV, CH 22 416c; BK XIX, CH 1-3 507a-511; CH 17 516d-523a; CH 12 523d-524a / *Christian Doctrine*, BK I, 3-5 625b-626; 22 629b-630a; CH 33 633b-634b; CH 35 634c-d

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, A 14b-15b; A 2, ANS 15 16a; Q 5, A 6 27c-28b; Q 6, A 2 28d-29c; PART I-II, QQ 1-5 609a-643d; Q 20, AA 1-4 712a-715b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 49, A 4, ANS 2b-4a; Q 1, 4, A 4, REP 1 373d

21 DANTE: *Divine Comedy*, PURGATORY, XVII [8]-XV [5] 79b-80c; PARADISE, XXV [1-69] 145d-146c

22 CHAUCER: *Tale of Melibeus*, 401a-432a

23 HOBBES: *Leviathan*, PART I, 62a; PART II, 155b-c; PART III, 237d

30 BACON: *Advancement of Learning*, 71a-72c; 73d-74a; 75d-76a; 91d-92b

31 SPINOZA: *Ethics*, PART I, APPENDIX 369b-372d; PART IV, PREF 422b,d-424a; APPENDIX V 447c

33 PASCAL: *Provincial Letters*, 94a-97a / *Pensées*, 505 261a-b; 793 326b-327a

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 5-53 191d-192b; SECT 55-56 192c-193b; SECT 62 194c-d; SECT 7 198a-c

42 KANT: *Pure Reason*, 235a-b; 238c-239a / *Fund. Prin. Metaphysic of Morals*, 256a; 257c-d; 266a-267d; 268b; 271d-279d / *Practical Reason*, 316a-317d; 327d-329a / *Pref. Metaphysical Elements of Ethics*, 373 / *Judgement*, 478a-479d esp 478a-b; 55d [fn 2]; 584d-587a; 588b [fn]; 592a-594b; 595d esp 595a-d

43 FEDERALIST: NUMBER 23, 85a-87a passim, esp 85b-c; NUMBER 41, 132b

43 MILL: *Utilitarianism*, 445a-447b; 448a-450a; 461c-463

44 BOSWELL: *Johnson*, 378a-b

46 HEGEL: *Philosophy of Right*, PART I, par 61 27b-c; PART II, par 12 44a; PART III, par 94 98b-d; ADDITIONS, 38 122c-d / *Philosophy of History*, INTRO, 168a-d; PART II, 267b; PART II, 307b-308a; PART IV, 348b-c; 363b-c

48 MELVILLE: *Moby Dick*, 213b-214b

52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 164b-165a

53 JAMES: *Psychology*, 14b-15a; 199b-204b esp 202-203a

5a(3) The order of quantities: the types of proportion

8 ARISTOTLE: *Physics*, BK VII, CH 4 330d-333a / *Metaphysics*, BK V, CH 6 [1016b18-31] 53b; CH 13 541b-c; CH 15 542-543a; BK X, CH 1 [1053b15-1053b9] 579-580a; CH 5 583a-c; CH 6 [1056b33-1057 16] 584b-c; BK XIII, CH 2 [1077a24-30] 608c; CH 6-9 611d-618c passim

9 ARISTOTLE: *Ethics*, BK V, CH 3-5 378-381d passim / *Politics*, BK V, CH 1 [1301b29-35] 503a

11 EUCLID: *Elements*, BK V 81-98b; BK VI, PROP 23 117b; BK VII, DEFINITIONS 20 127b

11 NICOMACHUS: *Arithmetic*, BK I-II 821d-831d; BK II 841c-848d

16 KEPLER: *Harmonies of the World*, 1078b-1079a

19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 7, ANS 68d-70d

31 DESCARTES: *Discourse*, PART II, 47c / *Geometry*, 295a-353b esp BK I, 295a-298b

34 NEWTON: *Principles*, BK I, LEMMA II, SCHOL, 31b-32a

38 ROUSSEAU: *Social Contract*, BK III, 407b-408b passim

42 KANT: *Pure Reason*, 73c-d / *Judgement*, 497a-498b

50 MARX: *Capital*, 19d-25d passim, esp 19d-20b, 25a-d

53 JAMES: *Psychology*, 551a-b

5a(4) The order of kinds h erarchy species and genus

5b The orde of the uni er e or of n ture the hierarchy of beings

(5 *Order as a system of relat onsh ps or related th ngs* 5b *The order of the un verse or of nature the hierarchy of beings*)

20 AQUIN S *Summa Theolog ca* PART I II Q 52 A I ANS 15d 18a PART II II Q 2 A 3 ANS and REP I 392d 393c Q 23 A 3 REP 3 485a d Q 26 A I REP 2 510c 511a PART III SUPPL Q 91 1016a 1025b

21 DANTE *Div n Comedy* PARADISE I [103 142] 107b d II [46–148] 108b 109b X [1 27] 120b c XIII [52–87] 126a b XXVII [97 120] 148b c XXVIII 148d 150b XXIX [13 36] 150b

22 CHAUCER *Troilus and C essida* BK III STANZA I 7 54b 55b ST NZA 250–253 87a b / *Knight s Tale* [2987 3016] 209a b

23 HOBBES *Leviathan* PART I 78d 79a

26 SH KES EARE *Julius C esar* ACT I SC III [62 71] 573b

27 S IAKESPEARE *Troilus and Cress da* ACT I SC III [75 139] 108d 109c

28 HARVEY *On An mal Gene ation* 400d-401a 426b-429b pass m esp 426d-427a 428a c 470a

30 BACON *Nov m O ganum* BK II AP I 17 149b d APH 27 157b 158d APH 29 30 159b d APH 48 179d 188b

31 DESCARTES *D scours* PART V 54c 56a / *Med a ons* IV 90a b / *Objections and Replies* 139b c 215a b

31 SPINO A *Eth cs* PART I PROP 29 366b c PROP 33 367b 369a AP ENDIX 369b 372d PART I PROP 6-7 374d 375c PART III 395a d PROP 2 396c 398b PART IV PREF 422b d-424a PROP 2 4 5a PROP 4 425b d

32 MILTON *Pa ad se Lost* BK V [397–505] 184a 186a K VIII [178] 232a 236a [314 356] 239a 240a BK IX [99–113] 249b

33 PASCAL *Pensées* 119–121 195a

34 NEWTON *Pri ples* BK II 269a 372a

35 LOCKE *Huma U derstand ng* BK II CH IX SECT 12 140c BK III CH VI SECT 11 12 271b 272b BK IV CH III SECT 27 321d 32 a CH VI S CT 11 334b 335b CH XVI SECT 12 370c 371a

35 BERKELEY *Human Knowledge* ECT 29 33 418c 419a passim SECT 146–153 442a 444a passim

35 HU IE *Human Under tand n* SECT V DIV 44 468d-469c SECT VIII DIV 7 –80 486b d

38 MONTESQUIEU *Sp: t of Laws* BK I 1a 2b

42 KANT *Pure Rea on* 93c 99a 133a-c 187c 189a 199c 200c 220a b 237b / *Fu d P n Metaphys c of Morals* 256d 257a 264d 265a / *Pract c l Reason* 292 d 301d 302d 307d 314d / *Judgement* 467a-470c esp 467d 468c 578d 580a esp 579b-c

45 FOURIER *Theory of Heat* 173b

46 HEGEL *Ph losophy of Right* DIT O 68 145c d / *Phi osophy of H s ory* INTRO 160b-162a PART I 220c PART IV 361a b

49 D R IN *Origin of Species* 55b-62a 63d 64d 96b 98a,c esp 96b-c 179b 180d 228c 229a c 238b 239a 241b c 243b-d / *Descent of Man* 340d 341d

53 JAMES *Psychology* 95b 98a 314a 571b 572 641a 643a 862b 863b [fn 2] 873a b 883a 886a 889a 890a

54 FREUD *Civil ation and Its Di contents* 779c

5c Order as a principle of beauty

7 PLATO *Republ c* BK III 333b 334b BK IV 342b-c / *Timaeus* 474d-475a / *Statesman* 594a-c / *Ph lebus* 637d

8 ARISTOTLE *Physics* BK VII CH 3 [246^{a}10-^{b}19] 329c 330a / *Metaphy ics* BK I CH 3 [984^{b}8-22] 502d BK XIII CH 3 [1078^{a}39-^{b}5] 610a

9 ARISTOTLE *Parts of Animals* BK I CH 5 [645^{a}4 26] 168d 169a / *Politics* BK V CH 9 [1309^{b}23 30] 512a BK VII CH 4 [1326^{a}29-3] 530b c / *Poetics* CH 7 685b-c

11 NICOM CHUS *Arithmetic* BK I 814a 8 6d 827a

16 KEPLER *Epitome* BK IV 868b

17 PLOTINUS *First En ead* TR VI CH I 21 d / *Sixth Ennead* TR VII CH 22 332d 333b

18 AUGUSTINE *Confessions* BK IV par 20 24b c / *C ty of God* BK II CH 21 161b-c BK XVII CH 14 464d

19 AQUINAS *Summa Theologica* PART I Q 5 A 4 REP I 25d 26c Q 96 A 3 REP 3 512a c

20 AQUINAS *Summa Theologica* PART I-II Q 49 A 2 REP I 2b 4a Q 54 A I ANS 22d 23d

35 LOCKE *Human Understand ng* BK II CH XII SECT 5 148a b

38 ROUSSEAU *Inequal ty* 345d 346a

42 KANT *Judgement* 488a 489a 544 545b 557c 558b

49 DARWIN *Descent of Man* 301d 302

53 JAMES *Psychology* 755a 865b

6 The absolute and the relative modes of con sider t on

7 PLATO *Phaedo* 242c 244b

8 ARISTOTLE *Categ ies* CH 6 [5^{b}11 9] 10a b / *Topics* BK II CH II [115^{b}3 35] 161c 162 c BK V CH I 178b d 179b BK VI CH 4 [14 ^{b}3-142 16] 194d 195 CH 8 [146^{b}36-147^{a}11] 200d 201a / *Sophisti al Refutations* CH 5 [166^{b}37-167^{a}20] 229d 230a CH 8 [170^{a}12 19] 234a CH 25 248b 249b / *Physics* BK I CH I [184 16-21] 259a / *He vens* K III CH 5 [303^{b}13 304] 394d 395b / *Met physics* BK V CH II 539c 540a BK X CH 6 583d 584c

19 AQUIN S *Summa Theolog ca* PART I Q 5 A I REP I 23 4a Q 7 A 2 31d 32c Q 11 A I REP 2 46d-47d A REP I 3 4 47d-48d Q 13 A 2 63c 64d A 11 REP 2 73c 74b Q 30 A I REP 2 4 167a 168a Q 7 A 3 REP 2 365b-367a Q 93 A 3 ANS 493d-494c PART I II Q 2 A 5 REP 2 618d 619c Q 6 A 6 NS nd REP 2 649a 650a Q 17 A 4 688d 689c Q 22 A I NS 720d 721c

20 AQUINAS *Summa Theolog ca* PART I II Q 50 A I REP 6a 7b Q 5 A I ANS 15d 18a Q 105 A 4 R P I 4 318b-321a PART III Q 17 A I RE 7 807a 808d A 2 ANS 808d 809d
31 DESCARTES *Rules* VI 8a 9a
31 S INO A *Eth cs* PART I DEF 36 355b AX OM 2 4-5 355d PRO 10 358a b
35 BERK LEY *Human Knowledge* S CT 12 415b-c
42 KANT *Pure Reason* 130b 133c 20 b 203c
53 JAM S *Psychology* 227b

6 Absolute and relat e with espect to sp ce t me motion

7 PLATO *Republic* BK IV 350d 351b
8 ARISTOTLE *Phys cs* BK IV C I 2 [209 31 36] 288b / *Heavens* BK I CH 3 [269b 8-30] 360d 361a BK IV C I 4 402c-403d
12 LUCRETIUS *Natu e of Th gs* BK IV [387 390] 49b
16 C ERNICUS *Revolut ons of the H a enly Spher s* BK I 514b 515a 519a BK II 557a b
16 KEPLER *Harm nies of the World* 1015a b
18 AU USTINE *Conf ss ons* BK XI par 18 27 93 95
30 BACON *N tum Organum* BK II APH 36 165 166b
34 NEWTON *Principles* DEFIN TIONS SCHOL 8b 13a C ROL V-VI 19a b BK I PROP 57 61 111b-114b
35 LO KE *Human Understand ng* BK II CH XII S CT 7 0 149d 150d S T 27 154c H XV SE T 5-8 163b 164b CH XXVI SECT 3-5 217d 218c
35 BE KE EY *Human K o l dg* SECT 97-98 431d-432 SE T 110- 17 434b 436a
36 SWI T *G lliver* PART 47b
53 JAMES *P ychol gy* 408a 411a esp 409 b 511b-512a 565a b 612a 624b esp 613 b 783a 785a

6b Ab olute and rel ti e with respect to truth

7 PLATO *C atylus* 86b d / *T ma us* 447c d / *Th etus* 517b-532a
8 ARI TOTLE *Met ph ics* BK IV H 5 6 528 531c BK V CH 3 [0 9b1] 552a BK X CH I [53 31-b3] 580 CH 6 [57a7] 584b BK XI CH 6 [06 b 1063b14] 590d 592a
9 A STOTLE *Eth* BK I CH 4 [95 30-b12] 340c d / *Rhetoric* K I H 4 [4 3 8] 651b d
12 LU R TIUS *N tu f Tl gs* K IV [469-521] 50b-51a
12 EP CTETUS *D cou es* CH 0 164c 166c
18 AUGU TINE *C ty of G d* K XI CH 18 523 b
19 AQUINAS *Sum Theologic* P T I Q A I A S nd R 3 10d 11d Q 6 A REP 94b 95 Q 85 A AN 453d 455b
23 H B *Leviatl n* RT 56b 57d 58a 65 ART I 267b
25 MONTAIGNE *Essays* 209c 212a 240c 246a 251d 253c 259c 261c 271b 272d 318 319b 439c 440a
30 BACON *Adva cement f Learn g* 13a c 57d 58b / *No um O g num* BK I APH 67 115d 116a
31 D SCARTES *Rules* I II 1a 3b VI 8a 10a / *Discourse* PART II 46b c
33 PASCAL *Pensée* 385 238b 239a
35 LOCK *Human Understand g* 88b c
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Another consideration of correlative terms *see* OPPOSITION 1a

The theory of proportionality or analogical similitude *see* SAME AND OTHER 3b and for the applications of analogy and proportion in metaphysics and mathematics *see* IDEA 4b(4) MATHEMATICS 4c QUANTITY 1b SIGN AND SYMBOL 3d 5f

Other discussions of indefinable terms *see* DEFINITION 1c PRINCIPLE 2a(3)

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Other discussions of the association of ideas *see* IDEA 5e MEMORY AND IMAGINATION 2c

Another discussion of the prior the posterior and the simultaneous *see* TIME 5d

The order of causes *see* CAUSE 1b

The order of goods or of means and ends *see* GOOD AND EVIL 5b-5c

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For The doctrine of the Trinity as concerned with order and relation in God *see* GOD 9a
The absolute and the relative in space time and motion *see* CHANGE 7c(3) SPACE 2a TIME 1
The absolute and the relative in truth goodness and beauty *see* BEAUTY 5 CUSTOM AND CONVENTION 9a-9b GOOD AND EVIL 6d OPINION 3c 6a PRINCIPLE 5 TRUTH 7-7b UNIVERSAL AND PARTICULAR 7a-7c

ADDITIONAL READINGS

Listed below are wo ks not included in *Great Book of the W estern World* but relevant to the dea and topics with which this ch pter deals These w orks re divided into two groups

I Works by authors rep esented in th s llection
II W ks by autho s not repre ented n this collect on

For the date place and other fa ts concerning the publicat on of the w ks cit d consult the B bliography of Additional Readings wh ch follo vs the last chapter of *Th G eat Id as*

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Chapter 79 RELIGION

INTRODUCTION

ARGUMENT is unprofitable—worse than that unintelligible—when opponents do not share some common ground Between the complete skeptic who denies reason s competence and the philosopher or scientist who appeals to it no common ground exists Between the man who obeys the rule not to contradict himself and the man who finds nothing repugnant in answering Yes and No to the same question there can be no argument There is an issue between them but the position each takes reduces the other to silence

Lack of a common measure for judging opposed views tends to render them incommunicable to one another For men to be in this plight is the exception in science and philosophy but it seems to be the typical situation where the basic issues of religion are concerned Of all subjects the most controversial religious issues seem to be the least capable of being settled by controversy No divis ons among men—certainly not those which separate philosophers or scientists—are as unbridgeable as the chasm between the faithful and those they call infidels bet een Jew and gentile or Christian and pagan Faith and lack of faith or the diversity of faiths seem to render certain questions as imponderable as they are weighty

On the definition of religion itself the deepest issue lies between those who conceive it as having a supernatural foundation in God s revelation and authority and those who think of religion as ha ing a purely natural origin in certain human tendencies which makes it no different from philosophy and science as an element of culture But religion can be supernatural only for those whose faith decla es it to be so Those who deny that it is supernatural may offer many reasons for thinking so and try in many ways to explain away faith What they all come to is that it is an illusion to suppose faith is God s gift rather than man s own will to believe To the man of faith this only means that his critic lacks the gift of faith or e n the wish to have it

Many consequences follow from this unarguable difference concerning the meanin of religion Religion to the man of faith usually means much more than the acceptance of a creed It means acts of piety and worship recourse to prayer the partaking of sacraments the observance of certain rituals the performance of sacrifices and purifications It mea s rendering to God what is His due obeying His commandments beseeching and gaining the help of His grace whereby to lead a life which shall seem worthy to Him When religion is conce e as nothing more than a set of beliefs which men have adopted it is restricted to one part of life It may or may not involve action as well as thought but it is not the fabric of a whole l fe It does not qualify every other part of it It does not demand that inner devotion and external conduct constitute the practice of a man s belief if he is to avoid hypocrisy

ACCORDING TO THIS difference in the concep tion of relig on as supernatural or natural we seem to hold incommunicably diff rent view of religious belief of revelation miracles and prophecies But those who agree that r ligion is not man made that it requires in some form divine authority and inspiration do not all have the same faith worship in the same way or conform to the same rites The issue there fore between men of different faiths—men who live according to the rules of different religious communities—is almost as difficult as that between the religious and the irreligious.

In the western tradition the plurality of religions necessarily raises a question of truth and falsity for any religionist hose faith exclu

the possibility of several equally true religions Idolatrous and superstitious heretical and chismatic are epithets which draw their special significance from controversies about religion and religions The word pagan as Gibbon points out comes to mean idolatry or the worship of false gods The Latin Christians he says bestowed it on their mortal enemies the Mahometans The Mohammedans in turn held the view according to Gibbon that all except themselves deserved the reproach of idolatry and polytheism The charges of idolatry and superstition occur also in the conflict between Jew and Christian between Protestant and Catholic countered often by charges of infidelity or heresy and schism

Quite apart from the general problem of church and state with its issues of political toleration and freedom of worship the very meaning of religion raises the question of tolerance in its most acute form It is not a question of political rights and liberties but of being right or wrong in one s religious beliefs and acts To the extent that the communicants of one religion regard themselves as believing what God has revealed to them and to the extent that they hold their religious practices to be prescribed by divine law they are not free in conscience it seems to entertain contrary beliefs and practices as conceivably true alternatives

The conflict between men of diverse faiths alike in their understanding of faith as divinely inspired somehow appeals beyond any human decision to God himself for judgment The controversy between men of any religious faith and those who treat such faith as a purely human prejudice seems to be even less susceptible of resolution by the ordinary processes of discourse

IF THESE OBSERVATIONS are accurate and just the materials of this chapter cannot be assembled dialectically—either as opposed views or as belonging together—simply by reference to the content of the various opinions which can be found in the great books In this chapter as in no others except perhaps those which treat of matters connected with religion—such as GOD IMMORTALITY SIN and THEOLOGY—it seems necessary to pay some attention to the opinion author as well as to the opinion and even in some cases to the community or culture in which the opinion arises It is not as necessary for example to know whether the man who writes about virtue is himself virtuous as it is to know whether the man who writes about religion is religious and to know furthermore in what sense he conceives himself as being religious and what religion he espouses

The distinction between sacred and profane and between religious and secular applies to books as well as to other things In the tradition of the great books only one book is set apart as sacred None of the writers included in this set regard the Koran as sacred scripture though Gibbon as an historian reports the Mohammedan belief in the Koran Mohammedans believe that the Koran is the word of God revealed to His one and only prophet as Jews believe that the Old Testament is divinely inspired writing and Christians believe in both Testaments as Holy Writ

But though the Bible is *the* traditionally sacred book of the west it is not read as such by all who write about it The historian or the philosopher who is not himself a religious Jew or Christian may acknowledge the belief of others without sharing it He reads the Bible as a collection of human writings which have exercised an unparalleled influence upon western culture Whatever the merit of these writings as wisdom history preachment or poetry they do not command a special kind of reading unless they are distinguished from all others by being the word of God not man Controversies over interpretations of the Bible may thus begin with each side begging the main question in issue Is the Bible sacred scripture or is it no different in kind from the poetry of Homer and the sayings of the Greek wise men?

The two ways of reading the Bible are incommensurable If the Bible is not sacred a critical reading may be expected to disclose inconsistencies in it and many of the things it says may be questioned in fact or in principle But if though humanly recorded it is the repository of divine revelation then it has an authority which puts it above questioning though not beyond the need for interpretation

There is one sort of proposition says Locke which challenges the highest degree of our assent upon bare testimony whether the thing

proposed agree or disagree with common experience and the ordinary course of things or no The reason whereof is because the testimony is of such a one as cannot deceive nor be deceived and that is of God himself This carries with it an assurance beyond doubt evidence beyond exception This is called by a peculiar name revelation and our assent to it faith which as absolutely determines our minds and as perfectly excludes all wavering as our knowledge itself and we may as well doubt of our own being as we can whether any revelation from God be true So that faith is a settled and sure principle of assent and assurance and leaves no manner of room for doubt or hesitation Only we must be sure that it be a divine revelation and that we understand it right

Locke seems to be putting two qualifications upon his remark that the bare testimony of revelation is the highest certainty The first concerns our assurance that we are not mistaken in accepting something as revealed The second concerns the correctness of our understanding of that which we take to be God s word

On the first point Hobbes though he says that faith is a gift of God which man can neither give nor take away by promises of rewards or menaces of torture also says that faith depends only upon certainty or probability of arguments drawn from reason or from something men believe already Faith does not come by supernatural inspiration or infusion but according to Hobbes by education discipline correction and other natural ways by which God worketh them in his elect at such time as he thinketh fit The object of faith is not God but the men whom God has appointed to instruct us belief which Hobbes distinguishes from faith goes beyond faith to the acceptance as true of what they say Consequently Hobbes writes when we believe that the Scriptures are the word of God having no immediate revelation from God himself our belief faith and trust is in the Church whose word we take and acquiesce therein

On this same point Aquinas gives a different answer He distinguishes between the material and the formal aspects of the object of faith As in the object of science so in the object of faith there is that which is known and is the material object so to speak and that whereby it is known which is the formal aspect of the object Thus in the science of geometry the conclusions are what is known materially while the formal aspect of the science consists in the means of demonstration through which the conclusions are known Accordingly if in faith we consider the formal aspect of the object it is nothing else than the First Truth For the faith of which we are speaking does not assent to anything except because it is revealed by God The articles of religious faith may be drawn from the content of Holy Writ but that Holy Writ is the revealed truth of God must first be accepted by an act of faith Aquinas seems to be meeting Locke s point by saying that it is faith itself which makes us sure that the propositions to which we assent by faith are the matter of divine revelation

On Locke s other point concerning the rightness of our interpretation of Scripture Locke himself remarks that though everything said in the text be infallibly true yet the reader may be nay cannot choose but be very fallible in the understanding of it Nor is to be wondered that the will of God when clothed in words should be liable to that doubt and uncertainty which unavoidably attends that sort of conveyance From which he concludes that since the precepts of natural religion are plain and very intelligible to all mankind and seldom come to be controverted and other revealed truths which are conveyed to us by books and languages are liable to the common and natural obscurities incident to words, methinks it would become us to be more careful and diligent in observing the former and less magisterial positive and imperious in imposing our own ideas and interpretations of the latter

That Scripture is difficult to interpret and subject to various interpretations Augustine also acknowledges but he differs somewhat from Locke concerning the task or duty which that fact imposes upon the religious man. Let no one then go on bothering me " Augustine writes with such words as Moses did not mean what you say he meant what I say If he said to me How do you know that Moses meant by these words what you say? —I should

take the question with complete calmness But when he says He did not mean what you say he meant what I say yet does not deny that what each of us says is true then O Life of the poor O my God in whose bosom is no con tradiction rain down the gift of moderation upon my heart that I may hear such talk with patience For what they say they say not be cause they are godly men and have seen it in the mind of Your servant Moses but because they are proud men it is not that they know the opinion of Moses but that they love their own opinion and this not because it is true but because it is their own

Confronted by a variety of interpretations each of which may be true Augustine remarks how foolish it is in such a flood of true mean ings rashly to assert that Moses intended one or the other of them If I had been Mo ses if I had been the same as he and You had given me the book of Genesis to write I should have wished that You would grant me such skill in writing such an art for the construction of what I had to say that not even those who can not yet grasp how God creates would reject my words as too much for their strength and again that those who can grasp so much would find fully contained in the few words of Your serv ant whatever truths they had arrived at in their own thinking Those who thirst for truth and not for vanity honor the human dis pensers of God s revelation Augustine thinks by believing that when under God s inspira tion they wrote these words they had in mind whatever is most excellent in them by the illu mination of truth and their fruitfulness for our profit

Thus when one man says to me Moses meant what I think and another Not at all he meant what I think it seems to me Augus tine declares that the truly rel gious thing is to say Why should he not have meant both if both are true and if in the same words some should see a third and a fourth meaning and any other number of true meanings why should we not believe that Moses saw them all since by him one God tempered Sacred Scripture to the minds of many who should see truths in it yet not all the same truths

Augustin s position combines belief in the truth of Scripture which is a consequence of the faith that it is God s word with latitude of interpretation in determining what that truth is appealing here to the ordinary standards of what seems to be true to the thinking mind In the course of commenting on Augustine s own interpretation of certain passages in Genesis Aquinas summarizes what he takes to be Augus tine s two rules The first is to hold the truth of Scripture without wavering The second is that since Holy Scripture can be explained in a multiplicity of senses one should adhere to a particular explanation only in such measure as to be ready to abandon it if it be proved with certainty to be false lest Holy Scripture be exposed to the ridicule of unbelievers and ob stacles be placed to their believing

As THE QUESTION whether the Bible is sacred writing affects the way it is to be read so the distinction between religious and secular writ ing seems relevant to what the great books have to say about religion

In the pagan tradition for example Herod otus in his *History* reports and discusses a great variety of religious doctrines and prac tices as characteristic of the peoples he visits or inquires about There seems to be no indication that Herodotus is judging the truth or falsity of these various religions either by reference to their reasonableness or from convictions born of his own adherence to one of these relig ons as against all the rest For the most part he is writing *about* religion rather than *religiously* with the possible exception of those passages in which he expresses his own views discussed in the chapter on PROPHECY on the oracles omens and portents which reveal the will of the gods

In contrast the tragedies of Aeschylus espe cially the Oresteian trilogy are religious poet ry comparable to Dante s *D vine Comedy* and Milton s *Parad se Lost* These are not books *about* religion as in a sense the great poem of Lucretius *On the Nature of Th ngs* is about reli gion—a passionate attack on religion by a man who is not religious It may be thought that the aim of Lucretius is to purify rel gion when he wishes to banish all bel ef in things degrading to the gods and inconsist nt with th peace so that men can approach th san tuaries of the gods with calm breast and w th tran qu l pea e of m nd But even a pe son who

er be able to carry us beyond the usual course of experience or give us measures of conduct and behavior different from those which are furnished by reflections on common life

Those who like Marx and Freud regard religion as a social imposture or the response to a neurotic need not only impute falsity or worse to the traditional religions of the west they also tend to reject natural religion Science is enough—for truth s sake for the conduct of life for society s welfare Yet in commenting on the following lines from Goethe

> He who has Science and has Art
> Religion too has he
> Who has not Science has no Art
> Let him religious be!

Freud says that on the one hand these words contrast religion with the two highest achievements of man and on the other they declare that in respect of their value in life they can represent or replace each other In these terms Freud thinks the religion of the ordinary man is justified— the only religion that ought to bear the name If a man does not have science or art to live by he must have religion for life as we find it is too hard for us and we cannot do without palliative remedies

It is the religion of the philosophers and the theologians which Freud questions He criticizes the philosophers for trying to preserve the God of religion by substituting for him an impersonal shadowy abstract principle and he challenges the grounds on which he thinks the theologians hold it to be an impertinence on the part of science to take religion as a subject for its investigations They deny that science has any competence whatsoever to sit in judgment on religion If we are not deterred by this brusque dismissal Freud declares but inquire on what grounds religion bases its claim to an exceptional position among human concern the answer we receive if indeed we are honored with an answer at all is that religion cannot be measured by human standard since it is of divine origin and has been revealed to us by a spirit which the human mind can not grasp It might surely be thought he continues that nothing could be more easily refuted than this argument it is an obvious *petitio principii* a begging of the question The point which is being called in question whether there is a divine spirit and a revelation and it surely cannot be a conclusive reply to say that the question cannot be asked because the Deity cannot be called in question.

Marx takes a similar view of the theologians. According to him the theologians beg the question in much the same way as do the classical economists for whom there are only two kinds of institutions those of art and those of nature Feudal institutions are artificial institutions, those of the bourgeoisie are natural institutions. In this Marx says they resemble the theologians who establish two kinds of religion. Every religion but their own is an invention of men, while their own religion is an emanation from God

Plato on the other hand excoriates those who think that all religion is a cooking up of words and a make believe It is almost as if he had Marx and Freud in mind when in the *Laws* the Athenian Stranger carries on the discussion of religion in terms of the distinction between nature and art and refers to those who would say that the Gods exist not by nature but by art and by the laws of states which are different in different places according to the agreement of those who make them. They are the very same people who hold that the honorable is one thing by nature and another by law and that the principles of justice have no existence at all by nature

In Plato s view the justice of the state and its laws must be founded not only on nature rather than art but also upon religion and a right belief in the gods The Athenian Stranger answers those who think it is dreadful that [we] should legislate on the supposition that there are Gods by saying why it is a matter of no small consequence to prove that there are Gods and that they are good and regard justice more than men do The reason he gives is that no one who in obedience to the laws believed that there were Gods ever intentionally did any unholy act or uttered an unlawful word but those who did must have supposed one of three things—either that [the Gods] did not exist which is the first possibility or secondly that if they did they took no care of man or third that they were easily appeased and turned aside

from their purpose by sacrifices and prayers That is why the demonstration of the existence of the gods would be the best and noblest prelude of all our laws

Rousseau s legislator like Plato s is also concerned with the role which religion plays in the foundation and life of the state But the question Which religion? arises at once for Rousseau as it does not for Plato who can treat the nature of the gods and the nature of the state as equally within the province of the political philosopher But for Rousseau living in a Christian civilization the political philosopher can not approach the subject of religion without being confronted by the theologian He finds it necessary therefore to distinguish between a revealed religion like Christianity and the natural or civil religion of the citizen

Christianity says Rousseau not the Christianity of today but that of the Gospel which is entirely different is the religion of man not of the citizen So far from binding the hearts of the citizens to the State it has the effect of taking them away from all earthly things I know of nothing more contrary to the social spirit We are told that a people of true Christians would form the most perfect society imaginable I see in this supposition only one great difficulty that a society of true Christians would not be a society of men The country of the Christian is not of this world

What the state needs Rousseau goes on to say is a purely civil profession of faith of which the Sovereign should fix the articles not exactly as religious dogmas but as social sentiments without which a man cannot be a good citizen or a faithful subject He then enumerates what he calls the dogmas of civil religion which ought to be few simple exactly worded without explanation or *commentary* such as the existence of a mighty intelligent and beneficent Divinity possessed of foresight and providence the life to come the happiness of the just the punishment of the wicked the sanctity of the social contract and the laws

Montesquieu takes the diametrically opposite view With regard to the true religion he writes I have never pretended to make its interests submit to those of a political nature but rather to unite them The Christian religion which ordains that men should love each other would without doubt have every nation blessed with the best civil the best political laws because these next to this religion are the greatest good that men can give and receive Montesquieu meets the argument that true Christians cannot form a government of any duration by saying that the more men believe themselves indebted to religion the more they would think due to their country The principles of Christianity deeply engraved on the heart would be infinitely more powerful than the false honor of monarchies than the human virtues of republics or the servile fear of despotic states

ANY CONSIDERATION OF the political significance of religion tends to lead into the controversy over the relation between church and state Three main positions seem to be taken one which calls for the integration of church and state one which calls for a subordination of either state to church or church to state and one which insists upon the autonomy of each as a basis for their relation to one another or carries separation even further to the point of complete divorce

The theocratic state of the Old Testament represents the Jewish version of the first position distinguished by the fact that the priesthood was in the service of the king Hobbes defines a Christian commonwealth in almost parallel terms It is indifferent whether it is called a church or a state because it is a company of men professing Christian religion united in the person of one sovereign It follows Hobbes argues that there is on earth no such universal church as all Christians are bound to obey because there is no power on earth to which all other commonwealths are subject *There are Christians in the dominions of several* princes and states but every one of them is subject to that commonwealth whereof he is himself a member and consequently cannot be subject to the commands of any other person And therefore a church such a one as is able to command to judge absolve condemn or do any other act is the same thing with a civil commonwealth consisting of Christian men and is called a *civil state* for that the subjects of it are *men* and a *church* for that the subjects thereof are *Christians*

According to Hobbes *temporal* and *spiritual* government are but two words brought into the world to make men see double and mistake their lawful *Sovereign* There is therefore no other government in this life neither of state nor religion but temporal Agreeing with Hobbes on the unity of government and the integration of church and state writers like Augustine and Roger Bacon place kings in the service of the priesthood and make the supreme pontiff who governs both spiritually and temporally the only earthly sovereign Gilson summarizes their view by saying that for them the definition of the Church includes the State and that the church has a universality which embraces the temporal and the spiritual domains alike

The position of Aquinas is indicated in the Treatise on Law in the passage in which he declares that no civil law can be valid or binding if what it commands is contrary to divine law It is more explicitly developed in his little tract *On the Governance of Rulers* It is not the ultimate end he writes of an assembled multitude to live virtuously but through virtuous living to attain to the possession of God Furthermore if it could attain this end by the power of human nature then the duty of a king would have to include the direction of men to this end But Aquinas holds men attain this end by divine not human power and therefore divine not human government is needed to direct men to their end Consequently he maintains in order that spiritual things might be distinguished from earthly things the ministry of this kingdom has been entrusted not to earthly kings but to priests and in the highest degree to the chief priest the successor of St Peter the Vicar of Christ the Roman Pontiff to whom all the kings of Christian peoples are to be subject as to our Lord Jesus Christ Himself For those to whom pertains the care of intermediate ends should be subject to him to whom pertains the care of the ultimate end and be directed by his rule

This last statement indicates that Aquinas unlike Augustine and Roger Bacon assigns to the state a subsidiary dominion and to the king a subordinate jurisdiction The opponent of Aquinas is usually thought to be Marsilius of Padua whose *Defensor Pacis* separates church and state but subordinates priest to king in a manner which corresponds to the Averroistic subordination of theology to philosophy Agreeing with both that church and state are distinct Dante agrees with neither on the relation which should obtain between the temporal and the spiritual domains or between civil and ecclesiastical government

Whereas Aquinas holds that only man s spiritual end is ultimate and that all temporal ends are intermediate Dante insists that man has two ultimate goals Man exists for a double purpose he says in *De Monarchia* Since he alone among beings partakes of both corruptibility and incorruptibility he alone among beings belongs in two final orders—one of which is his goal as a corruptible being the other as incorruptible Man has two beatitudes or two forms of happiness—an earthly perfection which consists in the complete realization throughout time of the intellectual powers of mankind and a heavenly perfection which consists in the vision of God These two states of bliss Dante argues like two different goals man must reach by different ways For we come to the first as we follow the philosophical teachings applying them to our moral and intellectual capacities and we come to the second as we follow the spiritual teachings which transcend human reason according to our theological capacities faith hope and charity

In terms of this theory of man s two ends and of the distinct spheres of reason and faith or philosophy and civil law on the one hand and religion and divine law on the other Dante formulates his doctrine of the autonomy of state and church The reins of man he writes are held by a double driver according to man s two fold end one is the supreme pontiff who guides mankind with revelations to life eternal and the other is the emperor who guides mankind with philosophical instructions to temporal happiness Church and state may be related as sun and moon in the sense that the state receives some illumination from the church even about matters within its own jurisdiction but according to Dante the state has its own source of light in reason Temporal power he maintains receives from spiritual power neither its being nor its power or authority nor even its functioning strictly

speaking but what it receives is the light of grace which God in heaven and the pope s blessing on earth cause to shine on it in order that it may work more effectively

All these mediaeval theories of what should be the relation between church and state—with the exception perhaps of the doctrine of Marsilius of Padua—conceive religion as having a supernatural source and the church as having a supernatural foundation both being instituted for the sake of guiding man to his supernatural end They differ from one another according to the view they take of man s earthly or temporal goods the power of his reason and the jurisdiction of his laws Their difference according to Gilson verifies the principle that the manner in which one conceives the relationship of the State to the Church that in which one conceives the relationship of philosophy to theology and in which one conceives the relationship of nature to grace are necessarily correlated

These mediaeval theories of church and state persist with certain modifications in modern times But the characteristically modern view of the matter begins with a different view of reli on itself. Its mediaeval prototype is to be found in the rationalism of Marsilius Within the secular state the chur h is a purely human institution religion is defended by philosophy for the contribution it makes to the peace of the civil community—or perhaps condemned by the apostles of earthly progre s as the opiate of the masses The principle of religious tolerance involves not merely tolerance of religion but tolerance for a diversity of religions and often the complete rejection of all religion

I esteem it above all things necessary writes Locke in his *Letter Concerning Toleration* to distinguish exactly the business of civil government from that of relig on and to settle the just bounds that lie between the one and the other The commonwealth Locke continues seems to me to be a society of men constituted only for the procuring preserving and advancing their own civil interests A church is a voluntary society of men joining themselves together of their own accord in order to the public worshipping of God in such manner as they judge acceptable to Him and effectual to the salvation of their souls

Locke s doctrine of the separation of church and state is reflected in the Constitution of the United States In the form which Jefferson gives it it appears in the declaration that Congress shall make no law respecting an establishment of religion or prohibiting the free exercise thereof Mill carries out the same principles in his attack on Sabbatarian legislation Such laws he thinks exceed the power of civil government They represent an illegitimate interference with the rightful liberty of the individual The notion that it is one s duty that another should be religious is in Mill s opinion the foundation of all the religious persecutions ever perpetrated Hegel on the other hand holds that the state should require all citizens to belong to a church but he points out that a church is all that can be said becau e since the content of a man s faith depends on his private ideas the state cannot interfere with it

The positions men take on the great issues of church and state thus seem to be determined in part by the diverse conceptions men have of religion This is no less true of opposing views on rel gious liberty on the treatment of heresy and schism on relig ous education the missionary calling and the conversion of infidels In the discussion of relig on perhaps more than anywhere else the first Yea or Nay seems to determine all other affirmations or denials

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in 4 HOMER *Iliad* BK II [265 283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the passage is in section d of page 12

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lower halves of the page For example in 53 JAMES *Psychology* 116a 119b the passage begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the page For example in 7 PLATO *Symposium* 163b 164c the passage begins in the lower half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One or more of the main divisions of a work (such as PART BK CH SECT) are sometimes included in the reference line numbers in brackets are given in certain cases e g *Iliad* BK II [265 283] 12d

BIBLE REFERENCES The references are to book chapter and verse When the King James and Douay versions differ in title of books or in the numbering of chapters or verses the King James version is cited first and the Douay indicated by a (D) follows e g OLD TESTAMENT *Nehemiah* 7 45—(D) *II Esdras* 7 46

SYMBOLS The abbreviation esp calls the reader s attention to one or more especially relevant parts of a whole reference passim signifies that the topic is discussed intermittently rather than continuously in the work or passage cited

For additional information concerning the style of the references see the Explanation of Reference Style for general guidance in the use of *The Great Ideas* consult the Preface

1 Faith as the foundation of religion

OLD TESTAMENT *Isaiah* 7 9—(D) *Isaias* 7 9 / *Habakkuk* 2 4—(D) *Habacuc* 2 4

NEW TESTAMENT *Matthew* 1 31 32 / *Mark* 16 16–18 / *John* 1 12 3 3 4 18 5 24 6 35 40 47 8 24 1 7 28 1 25 6 12 36 14 – 14 16 27 20 24–31 / *Acts* 1 43 16 5 33 / *Romans* passim esp 1 6–7 3 21–5 2 9 30–33 1 8–17 / *I Corinthians* 13 2 / *II Corinthians* 5 1 24 4 13–18 5 6–8 / *Galatians* passim esp 2 6–3 27 5 5–6 / *Ephesians* 2 8–9 3 – 1 / *Philippians* 3 8–9 / *Colossians* 1 2 3 2 5 7 12 / *I Timothy* 1 5 4 1 6 10 12 / *Hebrews* passim esp 10 22 23 10 38 39 11 40 / *James* 2 esp 2 5 2 17 26 / *I Peter* 1 7–9 2 6–7 / *I John* 3 23 5 4–5 9–10

18 AUGUSTINE *Confessions* BK I par 1 b BK VI par 6–8 36 37c / *City of God* BK X CH 2 3 3a c

19 AQUINAS *Summa Theologica* ART 1 Q A 1 3b 4a

20 AQUINAS *Summa Theologica* PART I II Q 62 A 4 AN 62b 63a Q 65 A 4–5 73d 75a Q 66 A 6 80c 81b PART II II QQ –7 380 416d PART SUPPL, Q 99 A 4 and R 1083 1084a

21 DANTE *Divine Comedy* PARADISE XXIV [52–8] 143b

23 HOBBES *Leviathan* PART I 83a b

25 MONTAIGNE *Essays* 209a 215b passim 238c 239c 293d 294b

30 BACON *Advancement of Learning* 19b c 95d 96c 100b

33 PASCAL *Pensées* 48 252 219a 220a 286–88 224a b

35 LOCKE *Toleration* 3b–4 10 11b

35 HUME *Human Understanding* SECT X DIV 100 0 496d 497b SECT XII DIV 32 509c

42 KANT *Practical Reason* 344c 349b esp 345c d 347b

44 BOSWELL *Johnson* 395a b 482a

46 HEGEL *Philosophy of History* INTRO 196d 197b PART V 349b 350

52 DOSTOEVSKY *Brothers Karamazov* BK V 127b 137 passim

1a The nature causes and conditions of faith its specific objects

NEW TESTAMENT *Mark* 9 3 29 20–24 / *Luke* 8 4 15 / *John* 2–13 6 29 0 37 38 12 44 46 14 7 1 16 7 2 24 3 / *Romans* passim esp 3 21–5 2 9 30–33 / *I Corinthians* 2 4 / *II Corinthians* 4 3 4 / *Galatians* 3 5 / *I Thessalonians* 13 5 8 / *Hebrews* esp 4 2 3 / *James* 2 p 2 7 6 / *I Peter* 7–9 / *I John* 2 23–24 4 1 3 5 4–5

1b The sources of religious bel ef

1b(1) Revelation the word of God and divine authority

19 AQUINAS *Summa Theologica* PART Q 1 3a 10c passim Q 2 A 13 61c 62b Q 32 A 1 175d 178a Q 46 A 2 253a 255 Q 68 A 1 ANS 354a 355c Q 117 A REP 597c 598c
20 AQUINAS *Summa Theologica* PART I II Q 91 AA 4-5 210c 212c Q 98 AA 2-6 240c 45b Q 100 A 3 ANS 253a d Q 10 A 2 R 1 267a 268a PART I Q 1 A 7 REP 3 385c 387a AA 9 10 388d 390d Q 2 A 1 R 1 391 392a AA 2-4 392a 394b A 10 ANS 399b-400b Q 4 A 8 409a d Q 6 A 1 AN 413d 414c Q 16 A 1 454c 455c PART III Q 7 A 7 AN 750a d Q 11 A 6 EP 2 775d 776b
21 DANTE *D vi e C medy* PURGATORY XXX-XXX II 99b 105d passim PARADI E V [73 78] 112d 113a XXIV [52 14] 143b d XXV [64-96] 145 b XXVI [1-45] 145d 146b
23 HO ES *Levi th n* PART I 83a b P RT II 137b 138b 160b c PART I 165a 167b 181a 188a 241a 242a CONC USION 281d 282a
25 MONT GNE *Essays* 209a c 212a 238 239 267c 268a 273a b 293d 294b
30 BACON *Adia cement of Le rn g* 2c 4c 19b-c 38a 98a 100b / *N w Atlantis* 203 c
31 DESCART *Discou se* PART I 43c / *Med ta t ons* 69a d / *Obj ctions and R pl s* 168 169a
32 MILTON *Parad e Lost* K VIII [267-318] 238a 239a BK XII [106- 5] 321b 322b [73-69] 323a 325a / *Samson Ag t tes* [472 478] 350
33 PASCAL *P ovinc al Letters* 147b 163a 166b passim / *Pens s* 56 -560 272b 273b 62 -6 8 286 287a 88 -88 345b / *Vacuum* 355b / *G ometric l Demon trat n* 440a b
35 LOCKE *Human Understand ng* BK III CH IX SECT 23 291b BK IV H VI SECT II 340b c CH XVI SECT 14 371b CI XVIII SECT 3 381 d S CT 6-9 382d 383d CH XIX 384c 388d passim E P ECT 4 385b
35 HUME *Huma Understand g* SECT X I DIV 13 509c
38 ROUSS AU *Ineq lity* 366 d
40 G B ON *D l e d Fall* 179b c 186c 187b 201a 307d 308a 346b
41 GI BON *D cl ne nd Fall* 227d 228a 231a d
43 M LL *Liberty* 311a b / *Utilita i nism* 455a-c
44 BO W LL *Johns n* 347a 394a b
46 HE L *Pl l phy of Hist y* INTRO 159b-160 ART I 245d 246c ART 307b 308a
51 TOLSTOY *W r a d Peace* K 50b
52 DO OEVSKY *B thers Ka am zo* K V 127b 137c passim esp 129b-130a BK V 150d 153d

1b(2) Mi cl s and sign as d vine confirmation

OLD TESTAM NT *Gen* 5 / *Exod* 4 -9 7 2 14 6 - 7 7 19 20.2 esp 19 16-2 2 18 24 15 17 33 8-10 34 10 29-35 / *Number* 11 24 5 16-17 / *Deuteron my* 4 0-15 36 5 esp 5.22 26 8 2 4 / *Jo hua* 3 7 4.24—(D) *Josue* 3 7 4.24 / *Ju dges* 6 11-24 36-40 / *I Samu l* 12 15 9—(D) *I Kings* 2 5 19 / *I Kings* 7 8—(D) *III K ngs* 17 18 / *II K ngs* 1 5 6 25-7.20 20 1 11—(D) *IV Kings* 1 2 5 6.25 7.20 20 1-11 / *Isai h* 38—(D) *Isaias* 38 / *Dan l* 2 1-5 31 6 18 8—(D) *Daniel* 2 1 3-23 3 9 -5 31 6 18-28

APOCRY HA *Wisdom of Solomon* 12 17 7 16—(D) OT *Book f Wisdom* 12 17 27 16 / *Bel and D agon* 31 4 —(D) OT *Daniel* 14 30-41 / *II Maccab es* 9—(D) OT *II Ma h abees* 9

NEW TESTAMENT *Matthew* 8 1 7 23 34 9 1-8 18 34 10 1 12 22 29 4 3 33 15 -39 17 -8 14 2 20.29-34 21 17-22 / *Mark* 1 23-2 12 4 37 40 5 6 34-56 7 24-8.26 9 1 10 16-29 1 46-52 15 31-32 6 16- 8 / *Luke* 1 5 66 4 31-5.26 7 1-23 8 22-56 9 1 12 20 28-44 14 1-6 17 19 18 35-43 / *John* 1 43-51 2 1-11 22 3 2 4 46-54 5 -9 36 9 11 1-48 12.27-30 37-40 13 9 4 9 20 1-9 24-31 / *Acts* 2 1-22 3:2-16 5 1 24 8 6-8 13 9 3 2 33 42 12 5-11 13 9-12 14 7 10 19 20 9- 22 6-16 28-3 10 / *Hebrews* 3 4

18 AUGUST N *City of God* BK X H 8-9 303a 304 CH 12-13 306d 307c CH 7 309 310b CH 3 320c 321d BK XXII CH 5 10 589a 599b / *Christian D ctrine* K II CH 41 42 656a d
19 AQUINAS *Summa Theol gica* PART I Q A 13 ANS nd R P 2 61 62b
20 AQUINA *Summa The l g a* PART I II Q 112 A 5 ANS 359 360c PART II Q A I R P I 391a 392 A 9 REP 3 398c 399b Q 5 A 2 411b 412a Q 6 A 1 ANS and RE 413d 414
21 D NT *Divine Comedy* PARAD SE XX V [52 1 4] 143b d
22 CH UCER *Tale of M n of Law* [4869-4924] 242b-243b / *Prior s s Tale* [3 418 62] 392a 395b esp [3 537-599] 394a 395 / *S cond Nu Tale* [5 787-816] 467a b [15 987-16 1] 470b 471b
23 HO *Leviath n* PART I 83c d PART II 137b PART III 166a 167b 188a 191a
25 MONTAI N *E ys* 98b 99
30 BA ON *Advancement f Le ng* 13d 14a 19b 33 d 38a 41b d 55c d / *N w Atl nt s* 201d 203
32 M LTON *Parad se Lost* K X [173 22] 323 324 / *S mson A nist s* [23 29] 340a
33 PA CAL *Pens s* 263 221a b 587-588 277a b 643-644 290b 291b 744-745 319a b 8 3-856 328b-341b
35 LOCK *Huma U dersta d g* K V CH XVI S CT 13 371 b CH X X ECT 5 388a-c
35 BE K LEY *Human K wledg* 63 425b-c
35 HU E *Hum U der t nding* CT X D V 86 488d-489b D V 98 0 49 d-497b

(2 *The* ı *rtue and practice of rel g on piety as just ce to God*)

2a Prayer and supplication their efficacy

OLD TESTAMENT *Genesis* 4 26 18-20-33 19 17 22 20 7 17 21 33 24 10-27 25 20-21 32 9-12 33 1 4 / *Exodus* 2 23 25 3 7 10 17 4-6 32 30 33 33 12 23 34 8-9 / *Numbers* 11 1 2 10-34 14 11 20 16 19-26 20 16 21 7-9 / *Deuter omy* 9 18 20 25 29 / *Joshua* 7 6-15 10 12 14—(D) *Josue* 7 6 15 10 12 14 / *Judges* 13 8-9 15 18 19 16 27 30 / *I Samuel* 1 12 19-25—(D) *I Kings* 1 12 19-25 / *II S m uel* 7 18 29 2 4 20 esp 22 7 24 10 25—(D) *II Kings* 7 18 9 22 4-20 esp 22 7 24 10-25 / *I Ki gs* 3 5 15 8 9 2-3 13 6 18 36-39—(D) *III Kings* 3 5 15 8 9 2 3 13 6 18 36-39 / *II Ki gs* 4 32-35 6 17 18 19 14 20 11—(D) *IV Kings* 4 32-35 6 17 18 19 14 20 11 / *I Ch onicles* 4 10 17 16-27 21 8-27—(D) *I Pa al pomenon* 4 0 17 16- 7 21 8 27 / *II Chronicles* 6 14 42 7 12 22 14 10-13 16 12 20 1 25 30 18-20 27 32 19-24 33 11-13 18 19—(D) *II Pa al pomenon* 6 14 42 7 12 22 14 10-13 16 12 20 1 25 30 18 0 27 32 19 24 33 11 13 18 19 / *Ezra* 8 22-23 9 5 15—(D) *I Esdras* 8 22-23 9 5 5 / *Nehem ah* 1 4 11 9 27—(D) *II Esdras* 1 4-11 9 27 / *Job* 6 8-9 8 5-6 9 13 16 0 16 17 22 21 15 22 27 30 20 33 26-28 42 8 10 / *P alms* passim esp 4 1 3 5 1 3 6 9 9 12 17 1-6 18 1 19 21 1 4 22 1 5 28 1-9 30 8 31 17 31 22 38 9 15 39 1 40 1 2 42 8 11 50 15 54 2-55 2 55 16-17 61 1 3 64 1 66 17 20 69 13 18 81 7 86 1-7 88 1-13 102 1 2 102 17 107 1 30 116 1-6 119 58 119 170 130 1-8 140 6 41 1-5 142 1 143 1 145 18 19—(D) *Psalms* pass m esp 4 2 4 5 2 5 6 10 9 13 16 1-6 17 1 13 20 2-5 21 2-6 27 1-9 29 9-30 18 30 3 37 10 16 38 13 39 2 3 41 9- 2 49 15 53 4-54 3 54 17 18 60 2 4 63 2 65 17 20 68 4 19 80 8 85 1 7 87 2 14 1 1 3 10 18 106 1 30 114 1 6 118 58 118 70 129 1 7 139 7 140 1-5 141 2 14 1 144 18 19 / *Pro erbs* 15 8 29 28 9 / *I aiah* 1 15 26 16 37 14 38 43 22 55 6-7 56 58 1-9 66 24—(D) *Isaias* 1 15 26 16 37 14 38 43 22 55 6-7 56 7 58 7-9 66 24 / *Jerem ah* 16 11 14 14 11 15 17 13 18 29 7 12 14 32 16-44 42 1-6 20—(D) *Jeremias* 7 6 11 14 14 11 15 1 17 13 18 29 7 12 14 32 16-44 42 1-6 o / *Lam e t t n* 3 8 44 55-57 / *Dani l* 6 4 13 9 / *J el* 32 / *J nah* 1 4 6 2 4 1 4—(D) *Jona* 1 4 6 2 2 11 4 1 4 / *M cah* 3 1 4—(D) *Mi heas* 3 1 4 / *Zechar h* esp 12 13 8 20-23 10 1 2 13 9—(D) *Z ha ias* 7 e p 7 12 13 8 20-23 10 1 2 13 9

APOCRYPHA *Tob t* 3 12 8 13—(D) OT *Tob as* 3 12 8 13 / *Judith* 4 9-15 8 14 17 3 9—(D) OT *J d th* 4 7 15 8 14 17 28 33 9 / *Rest of Esther* 10 8-10 13 8 14 13—(D) OT *Esther* 10 8 10 13 8 14 19 / *Wisd m of Solomon* 7 7 9 16 28—(D) OT *Book of Wisdom* 7 7 9 16 28 / *Eccles asticus* 4 5-6 7 10 14 13 14 17 25 18 22 24 21 5 28 2 34 24 26 35 13 17 37 15 38 9-14 39 5-6 51—(D) OT *Ecclesiasticus* 4 5-6 7 9-10 13 18 17 23 18 22 24 21 6 28 2 34 29-3 35 16 21 37 19 38 9-14 39 6-9 51 / *Baruch* 1 7 13 2 14 19 3 1-8 4 27 28—(D) OT *Baruch* 1 7 13 2 14 19 3 1-8 4 27 28 / *Song of Three Child en* 10-27—(D) OT *Da iel* 3 25-50 / *Susanna* 42 44—(D) OT *Daniel* 13 42 44 / *I Maccabees* 4 8 11 7 37—(D) OT *I Machabees* 4 8 11 7 37 / *II Macca bees* 1 5-6 8 23 30 2 10 3 14 36 12 39-45 15 21 29—(D) OT *II Machabees* 1 5-6 8 23 30 2 10 3 14-36 12 39-46 15 21 29

NEW TESTAMENT *Matthew* 6 5 15 7 11 18 19-20 21 17 22 26 36-45 / *Mark* 9 14 30 esp 9 28 29 11 24 26 13 33 14 32 39 / *Luke* 11 1 13 18 1 14 21 36 22 40-46 / *John* 4 10 9 31 14 13 16 15 7 16 23 26 17 / *Acts* 4 23-33 6 4 8 22 4 9 36-4 10 1-4 30-31 / *Romans* 8 26-27 10 12 13 12 12 / *I Corinthians* 11 4-5 14 13 16 / *Ephesians* 6 17 18 / *Philippians* 4 6 / *Colossians* 4 2 3 / *I Thessalon a s* 5 17 / *II Thessalonians* 3 1 2 / *I Timothy* 2 1-8 4 4-5 5 5 / *Hebrews* 13 18 / *James* 4 3 5 13 18 / *I Peter* 3 12 4 7 / *I John* 3 2 5 13 16 / *Revelation* 5 8—(D) *Apocalypse* 5 8

4 HOMER *Iliad* BK I [1 100] 3a 4b BK II [394 421] 14a b BK IX [485-512] 62a b BK X I [218 254] 114c d / *Odyssey* BK III [43-69] 193c d BK V [436-463] 212b c BK XX [91 121] 297a b

5 AESCHYLUS *Suppliant Maidens* 1a 14a c esp [1 1 5] 1a 3a [516-510] 7c 10b [1018-1073] 13d 14a c / *Per ia s* [215 225] 17c [517-693] 20c 22b / *Seven Against Thebes* [69 23] 28a 30b / *Agamemnon* [351 398] 55d 56b [810-854] 60d 61a

5 SOPHOCLES *Oed pus the K ng* [151 218] 100c 101b [863-910] 107b c / *Oed pus at Colo* [461 500] 118b d / *Ajax* [684-692] 149a

5 EURIPIDES *Electra* [190-212] 328c d

5 ARIS O HANES *Peace* [973 1016] 537a c / *Th smopho ia usae* [295 371] 603d 604c

6 HERODOTUS *History* BK I 20d 21a BK VI 196d 197a BK VII 226c 239d 240a BK VIII 270c

6 THUCYD DES *Peloponnesian War* BK 517d

7 PLATO *Cratylus* 94a / *Phaedrus* 141c / *Re publ* BK II 313c 314d / *Timaeus* 447a / *C it a* 478a b / *Laws* K I 669c 670a BK VII 719d 720b BK X 759b c 770d 771b

12 E ICTETUS *Discourses* BK II CH 16 156d 157a

12 AU ELIUS *M d tations* BK V SECT 7 269d BK IX SECT 40 295b

2b Worship and adorat on the rituals and ceremonials of religion

(2 *The virtue and practice of rel g on p ety as justice to God 2b Worship and ado ation the rituals and ceremon als of religion*)

[352 365] 253d 254a BK XIV [233 261] 262c d

5 AESCHYLUS *Agamemnon* [810–829] 60d 61a

5 SOPHOCLES *Oedipus at Colonus* [461–509] 118b d / *Ajax* [693–713] 149a [1040–1421] 152a 155a c / *Ph loctetes* [446–452] 186a

5 EURIPIDES *Trojan Women* [1123 1250] 279c 280c / *Ion* [82–183] 282d 283c / *Electra* [190–212] 328c d [774–858] 334b d / *Bacchantes* 340a 352a c

5 ARISTOPHANES *Acha nians* [237 279] 458a b / *Frogs* [312 459] 567d 569c / *Pl tus* [627 747] 636d 637d

6 HERODOTUS *History* BK I 31a c 32d 33a 40d 41b 45a b BK II 56d 64c BK III 95a c BK IV 129c 130b 134b d 138a b 142b c 155c 156a BK V 176a b BK VI 205c d

7 PLATO *Republ c* BK I 297b BK IV 345d 346a / *Laws* K VII 718d 719a BK VIII 31d 732c

9 ARISTOTLE *Polit cs* BK VI CH 8 [1322b19 29] 526c

12 LUCRETIUS *Nature of Th ngs* BK II [600–660] 22c 23b BK V [194 1203] 76d BK VI [56–79] 81a b

13 VIRGIL *Ae eid* BK IV [5 4–521] 181a b BK V [4 103] 188a 190a

14 PLUT RCH *Numa Pomp l us* 49a 61d passim esp 56d / *Camillus* 104b-d 110b d / *Aemil us Paulus* 214b d / *Mar ellus* 247d 248b / *Nicias* 424b d / *C assus* 445d 446b / *Alexander* 541b-c / *Demet ius* 735c d

15 TA ITUS *Histo s* BK IV 282d 283b BK V 296a

18 AU USTINE *Co f ssions* BK V par I 27a b BK VI par 2 35a c BK IX par 14 16 65c 66a K X p r 49–5 83c 84b / *City of G d* BK V CH 27–31 259 262a BK X CH I 298b d 299d c 3 300b 301 CH 15 17 308a 310b / *Ch ist an D ctr* BK I CH 6 626a b K III CH 9 661 -c

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21 DAN *D ine Comedy* PUR ATORY VI I [1–36] 64a c

23 HOBBE *Le atha* PART I 80c 90b d ART II 161b 163d PART II 180 d 206c 207a 226b-227c PAR IV 249b 250 261c 262a

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32 MILTON *Paradise Lost* BK IV [720–739] 168a b BK V [136–208] 178a 179b BK XI [550–640] 229a 231a BK XII [227 256] 324a b [285–306] 325b 326a / *Areopagitica* 402 b

33 PASC L *Provincial Letters* 62b 64b / *Pensées* 249–253 219a 220a 489 259a

35 LOCKE *Toleration* 5a b 10d 15a

35 HUME *Human Understanding* SECT V DIV 41 468a b

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41 GIBBON *Decl ne and Fall* 83d 110b-d 195a 198d 207a 208c 226a 227b 232c 233a 378b d

42 KANT *Jud ement* 504b 505a 509 510a

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48 MELVILLE *Moby Dick* 25b 28a 39a b 6 b 65a

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52 DOSTOEVSKY *Brothers Karama ov* BK I 13a d BK V 131c d BK VII 171a-c BK XI 313c 314a

2c The nature institution and uses of the sacraments

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18 AUGU TINE *Conf ss ons* BK IX par 12 64d 65a par 14 65a b par 36 71a BK XIII par 26–29 117c 118c / *City of God* BK X CH 6 302a d CH 19–20 310d 311c BK XIII C 3 4 361a 362 CH 7 362d 363b BK X CH 26-27 438c 439d K XX C 26 555a 556b BK XXI C 6 573b 574a CH 20 575c d CH 25 579d 581a / *Chr t Doctr ne* BK II CH 3 637c d CH 41 656a c BK III CH 9 661a-c BK IV CH 21 690d 691b

19 AQUINAS *Summa Theologica* PART I Q 9 A 3 ANS 490c 491b Q 113 A 5 ANS 579a d

20 AQUINAS *Summa Theol gica* PART I II Q 101 A 4 ANS and R P 1 2 269 270b Q 102 A 5 283c 292c Q 103 A 1 REP 3 298b 299b A 4 ANS 302a 304a Q 108 A 2 ANS and REP 2 332b 333d PART II II Q I A I REP I 380b 381a A 3 REP 4 381d 382 A 8 REP 6 387a 388c Q 2 A 7 ANS 396a 397c Q 3 A 1 REP 1 400c-401a Q 10 A 2 REP 5 436b-437d Q 11 A 4 ANS 441b-442b PART II QQ 60-65 847a 884a c PART III SUPPL, Q 71 A 9 REP 3 910d 912b Q 83 A 3 ANS and REP 4 978 980d Q 99 A 4 1083a 1084a

21 DANTE *Duine Comed* HELL XXVII [67 132] 40c-41a PURGATO Y IX [73 145] 66 67b XXVII XXXI 1 94c 105d

22 CHAUC R *Prologue* [653-662] 170b / *W fe f Bath s Prologue* [5583-5749] 256a 258b / *Merchant s Tale* [9193-9 0] 320a b / *Par do ers Tale* [12 829-902] 381b 382b / *Parso s T le* 495a 550a esp par 1 22 495a 510b par 85-90 543a 546b

23 HOB *Leviathan* PART I 71b RT III 177d 178a 180c d 206c 207a 208b 211c 212c PART IV 249b 250c 263d 264a

27 SHAKESPEARE *Hamlet* ACT I SC V [74-79] 37d ACT III SC III [36-98] 53d 54b / *Othello* CT V SC II [25-57] 239b

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31 DESCARTES *Objections and R pl es* 162d 165d

32 MILTON *Pa adise Lost* BK XII [436-445] 328b 329a

33 PASCAL *Provincial Letters* 71b 80b 128b 137b / *Pensées* 554 270a 862 343a 870 344a b 904-9 5 348b 349a 923 351b

35 LOCKE *Tolerat n* 12a / *Hum n Underst nd i g* K IV CH XX CT 10 391 392a

36 STERNE *Tristram Shandy* 221a 224a 257a 259b 260b 261a 373b 376a

40 GIBBON *De line and Fall* 193a b 297c d

41 GIB ON *Decl and Fall* 329d 334b-c

44 BOSWELL *Johnso* 173d 174a 481c

46 HEGEL *Ph losophy of H t ry* PART IV 331d 332c 338a d 349d 350a

51 TOLS OY *Wa a d P ce* BK I 38b 43b 44b BK IV 183c d BK XI 476c-478a

52 DOST EVSKY *Brothers Ka ma ov* K II 21d 22b BK III 80c 81

2*d* Sacrifices nd prop t t ons

O D TEST MENT *Genest* 4 6 8 18-22 15 6-7 22 / *E od s* 8 25 29 9 1 0 3 11 24 26 2 1 3 16 0 4 26 2 9 3 23 19 24 5-8 29-30 34 19-20,26 35.20- 1 29 / *Leviticus* 10 2 14 1 3 16- 7 19 5-7 21 23 27 / *Number* 3 12 3 5-9 10 0 5 16 18 19 6 28 9 3 .25-54 / *Deuter omy* 12 14:22 29 15 9 2 6 1 17 7 1 21 9 26 10- 5 / *Joshu* 8 30-3 9-12 2 29 —(*D*) *J su* 8 30-31 22 9- 1 9 / *Judges* 6 9-21 25-28 11·28 40 13 15 23 / *I Sam el* 1 11 19 8 2 12 17 27 29 6 13 15 7 8 10 13 5 14 15 1 23 esp 15 21 3—(*D*) *I Kings* 1 11 19-28 2 1 17 7 29 6 13 15 7 8 10 13 5 14 15 1 23 esp 15:21-23 / *I Kings* 8 62-64 9.25 18 16-39—(*D*) *III Kings* 8 6 -64 9.25 18 16-39 / *II Ki gs* 16 12 16 —(*D*) *IV Kings* 16 12 16 / *I Ch icles* 29 1-9 14,20-21—(*D*) *I Paral pomenon* 29 1-9 14 20 21 / *II Chro icles* 7 1-7 29 20 35 35 1 19—(*D*) *II Paral pomenon* 7 1 7 29 20-35 35 1 19 / *E ra* 8 35—(*D*) *I E d as* 8 35 / *Nehemiah* 1 29-39—(*D*) *II Esdras* 1 29 39 / *Job* 1 5 / *Psalms* 4 5 27 6 40 6 50 51 16-19 54 6 66 15 107:22—(*D*) *Psalms* 4.6 26 6 39·7 49 5 18 21 53 8 65 15 106.22 / *Proverbs* 3 9 10 15 8 21 3 27 / *Isaiah* 1 11 17 43.23 24 53 10 66·20 21—(*D*) *Isa as* 1.11 17 43.23 24 53 10 66.20-21 / *Jerem ah* 7·21 23—(*D*) *Jeremias* 7.21 23 / *E ekiel* 43 18 27 44 7 30 45 13 46 24—(*D*) *E ech el* 43 18-27 44·7 30 45 13 46 24 / *H s a* 6 6 8 11-9.4—(*D*) *Osee* 6 6 8 11-9 4 / *Joel* 2 12 14 / *Amos* 4 4-5 5 21 27 / *Micah* 6 6-8—(*D*) *M cheas* 6 6-8 / *M l chi* 1·7 14 3 3 10—(*D*) *Malachias* 1·7 14 3 3 10

A O RYPHA *Judith* 16 16-19—(*D*) OT *Jud th* 16.22 23 / *Ecclesiasticus* 7 9 31 14 11 3 19 34 18 20 35 1 12—(*D*) OT *Eccles ast cus* 7 11 33 35 14 11 30 19-20 34:21 24 35 1-15 / *Song of Three Ch ldren* 14 17—(*D*) OT *Dan el* 3 37-40 / *B l d Dragon* 1-22—(*D*) OT *Dan l* 14 1- 1 / *I Maccabees* 4.49-56—(*D*) OT *I Machabe s* 4 49-56 / *II Maccabees* 1 18 36 2 9-11 3 3 35—(*D*) OT *II Macha b s* 1 18-36 2 9-11 3 3 -35

N W TESTA NT *Matthew* 5:22 24 9 13 12·7 26 6 29 / *Ma k* 12 32 33 41 44 14 22 25 / *Luke* 2.22 24 21 1 4 22 14-20 / *J h* 51-5 / *Roma s* 5 7 11 12 1 / *I Cor th ans* 5 7 11.23 29 15 3 / *II Corinthians* 5 14 21 / *Ephesians* 5.2 / *Hebrews* 5 1 3 7.26-27 8 3 4 9 1 10.22 11 4 17 13 9 16 / *I Peter* 1 8 19 2 5,24 4 1 / *I John* 7 3 16

4 HOMER *Il ad* BK I [1 120] 3 -4b [3 4-317] 6b [364 392] 6d 7a [428 471] 7c 8a K I [394 431] 14a b BK VI [263 311] 42d-43b BK VII [313 3 6] 49b K X [5 7-549] 62c BK XII [1-33] 82a b BK XXIII [54 26] 161d 163d BK XXIV [64 76] 171d 172a / *Odyss y* K [1 1] 193 K X [543-555] 234d 235 BK XII [352-365] 253d 254a BK XIV [33 26] 262c d

5 AESCHYLUS *Persians* [215 225] 17c [517-693] 20 22b / *Seven Ag inst Th be* [265 282] 30b / *Agamem on* [40-257] 52c 54d esp [2 5- 38] 54b c [1412 1425] 67 / *Choeph* [5 4-539] 75a b

5 SO HOC ES *Oed pu t C l us* [46 -5 9] 118b-d / *Aj x* [646-692] 148c 149a / *Elect a* [4 4 47] 159b-d

(2 *The virtue and practice of religion piety as justice to God 2d Sacrifices and propitiations*)

5 EURIPIDES *Heracleidae* [403-629] 251c 253c / *Ion* [247 282] 284a c / *Electra* [998 1034] 336b c / *Hecuba* [501-582] 357a d / *Phoenician Maidens* [896 1018] 386a 387b / *Iphigenia Among the Tauri* 411a-424d esp [1 41] 411a b [456-471] 414c d / *Iphigenia at Aulis* 425a 439d esp [87 110] 425d 426a [358 365] 428a [1 64 1208] 435d 436a
5 ARISTOPHANES *Peace* [180-194] 528a [362-426] 530b d [922 1022] 536c 537c / *Plutus* [1107 1209] 641a 642d
6 HERODOTUS *History* BK I 6a 32d 33a 48c BK II 57b 58b 59a 72d 73a 77c d BK IV 125a b 134b d 142b c 157b BK V 174d 175b BK VI 199d 200a 200d BK VII 226c 235a 248c d 250c d BK VIII 267a 282b c
7 PLATO *Phaedrus* 122d 123a / *Symposium* 163a / *Euthyphro* 198 c / *Phaedo* 247a / *Republic* BK I 295d 296a 297b c BK II 313d 314d / *Critias* 484d-485a / *Laws* BK IV 683a b BK VI 712a BK VII 719b d 721b c 724a b BK VIII 731d 732d BK X 768d 769c 770d 771b BK XII 791d 792a
9 ARISTOTLE *Ethics* BK VIII CH 9 [1160 19-29] 412b-c / *Politics* BK VI CH 8 [1322b19-29] 526c
12 LUCRETIUS *Nature of Things* BK I [80 101] 2 b BK [194 1203] 76d
13 VIRGIL *Aeneid* BK I [728-740] 123a b BK II [108 136] 127a b BK III [356-462] 157a 160a esp [404 440] 158a 159a [525-550] 161b-162a BK IV [48 67] 168b 169a [95 237] 172a 173b [450-456] 179b BK V [42 103] 188a 190a [762 778] 207a b BK VI [2 2 263] 216b 218a BK XII [166-215] 358b 360a
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15 TACITUS *Annals* BK XII 140d 141a BK XIV 148d 149a BK XV 168a b / *Histories* BK II 215 BK IV 282d 283b
18 AUGUSTINE *City of God* BK X CH 1 298b d 299d CH 3-7 300b 303a CH 11 305b 306d CH 16-21 308b 312 CH 24 313a b CH 25 26 314b 315b CH 31 319b d
20 AQUINAS *Summa Theologica* PART I II Q 1 1 A 4 269a 270b Q 1 2 A 3 272b 276c A 5 RE 2 283 292 Q 103 A 1 RE 1 298b-299b A 2 ANS 299b 300d PART II II Q 2 7 ANS and REP 2 396a 397c Q 182 A 2 REP 3 621d 623a PART III Q 22 827c 833a Q 62 A 5 862b-863a PART III SUPPL Q 71 900d 917b passim
21 DANTE *Divine Comedy* PARADISE V [13-84] 112b 113a
23 HOBBES *Leviathan* PART I 162d 163b PART III 197d 198a 204b-c
25 MONTAIGNE *Essays* 250b 251c
35 LOCKE *Toleration* 12a 13a
38 MONTESQUIEU *Spirit of Laws* BK XXV 211a c
40 GIBBON *Decline and Fall* 93b 98a 121a b 349c 350b 397b 460a b 461d 463a-c 547b
41 GIBBON *Decline and Fall* 226d 227b
44 BOSWELL *Johnson* 482a b
46 HEGEL *Philosophy of History* PART I 227c 228a PART III 305b c
47 GOETHE *Faust* PART II [8568-8590] 208b-209a

2e Fasting and almsgiving

OLD TESTAMENT *Exodus* 34:2 8 / *Leviticus* 19 9-10 23:22 25 35 37 / *Deuteronomy* 15 7 11 24 17 22 26 12 13 / *Judges* 20:24 28 / *I Samuel* 7 3-6—(D) *I Kings* 7 3-6 / *II Samuel* 12 15 23—(D) *II Kings* 12 15 23 / *Ezra* 8 21-23 10 6—(D) *I Esdras* 8:21 10 6 / *Esther* 4 1-3 15 17 / *Job* 29 11 16 31 16-22 / *Psalms* 35 13 41 1 3 69 10-11 109 21-24—(D) *Psalms* 34 13 40:2 4 68 10-11 108:21-24 / *Proverbs* 3:27 28 11 4 14 21 31 19 17 21 13 26 22 9 28:27 29:7 / *Ecclesiastes* 11 1 2 / *Isaiah* 58 3 12—(D) *Isaias* 58 3 12 / *Jeremiah* 14 12—(D) *Jeremias* 14 12 / *Ezekiel* 18 4 21—(D) *Ezechiel* 18 4 21 / *Daniel* 10:2 3 / *Joel* 2 12 18 / *Zechariah* 7—(D) *Zacharias* 7
APOCRYPHA *Tobit* 1 16 17 2 47 11 16-17 12 8 10 14 10-11—(D) OT *Tobias* 1 19-2 2 47 12 17 18 12 8 10 14 10-11 / *Judith* 4 13—(D) OT *Judith* 4 10-11 / *Ecclesiasticus* 3 30 4 1-8 7 10 32 33 12 1 7 14 13 17:22 23 29 1 2 8 13 20 34 26 35 2 40:24—(D) OT *Ecclesiasticus* 3 33 4 1-8 7 9-10 36-37 12 1-5 14 13 17 8 19 29 1 2 11 17 6 34 31 35 4 40.24
NEW TESTAMENT *Matthew* 4 1 4 5 42 6 1 4 16-18 9 14 15 10 8 40 42 17 14 22 19 16-22 / *Mark* 2 18 20 9.24 29 10 17-22 12 41 44 / *Luke* 3 11 4 1 4 5 33 35 6 3 5 11 41 12 33 14 12 14 18 11 12 18 23 21 1 4 / *Acts* 10 1 4 20 35 / *Romans* 12 8 / *I Corinthians* 13 3 / *II Corinthians* 6 4-6 8-9 / *Galatians* 2 10 / *I Timothy* 6 17 19
6 HERODOTUS *History* BK IV 156d 157a
18 AUGUSTINE *City of God* BK XXI CH 2-576a c CH 27 583a 584c
20 AQUINAS *Summa Theologica* PART II II Q 3 A 1 ANS 400c 401a Q 32 540a 550a Q 187 A 3 665 -666a A 3 ANS and REP 4 666a 669b AA 4-5 669b 673b PART III SUPPL Q 1 A 9 ANS and REP 1 2 6 910d 912b
33 PASCAL *Provincial Letters* 66 91a 94a
40 GIBBON *Decline and Fall* 82a 197b d 198b d 596c 597a
41 GIBBON *Decline and Fall* 110d 111c 232c-233a c
42 KANT *Science of Right* 443b d
48 MELVILLE *Moby Dick* 60b-65a

f Purific tory rites the remission of s n by b ptism nd penance

O TESTAMENT *Exodus* 19 9-11 4 15 30 17-21 / *Levit cus* 4-6 7 1-7 9 11 17 19.-0 2 / *Numbers* 5 5 31 6 9-12 8 5-7 15 22-29 19 31 19-24 / *Deuteronomy* 21 1-9 23 9-11 / *I Samuel* 3 12-14—(D) *I Ki gs* 3 12 14 / *II Chronicles* 29-30—(D) *II Pa al p menon* 29-3 / *Nehemiah* 13.22—(D) *II Esdras* 13 2 / *Ps lms* 51 1 2 7 10—(D) *Psalms* 50 3-4 9-12 / *Isai h* 1 16-18—(D) *Isa as* 1 16-18 / *E.eki l* 36.24 25 43 18 27—(D) *Ez chiel* 36 4 25 43 8 7

APOCRYPHA *Eccl siast cus* 34.25—(D) OT *Ec cle iasticus* 34 30 / *I Ma cabees* 4 38-61—(D) OT *I Machabees* 4 38-61 / *II M ccab es* 1 18 36—(D) OT *II M chab es* 1 18 36

NEW TESTA IENT *Matthew* 3 15 1 20 16 19 18 18 20.20-23 23 25-26 28 18 2 / *M k* 1 4-8 10 35 40 16 16 / *Luke* 22 3 3 16 1 50 13 1-5 / *John* 1 25-33 3 5 22-27 13 1 15 15 1-3 20 22-23 / *Acts* 1 5 2 37 41 3 19 5 31 8 12 17 20-22 35 38 10 47 48 11 16 8 13 23 24 17 30-31 19 1-5 2 26 2 6 26 19 20 / *Romans* 2 4-5 6 / *I C in th* 6 11 12 3 / *II Cor nthians* 7 9-10 / *G latians* 3 27 / *Ephesians* 4 5 / *I Peter* 3.20 21

4 HOM R *Il ad* BK I [446-451] 7c BK VI [263-285] 42d-43a K IX [173 181] 58d 59a K X IV [81 313] 174b c / *Odyssey* BK III [430 446] 197c BK XII [3 5 338] 253c K XX I [478-501] 310d 311a

5 AE CHYLUS *Ch phor e* [0 1-10 6] 80 d / *Eumen des* [76- 98] 84a b [436-469] 86a b

5 SOPHO L *Oed pus at Colo u* [46 -509] 118b d / *Aj x* [646-692] 148c 149a

6 H DOTU *History* BK I 8b-c 45a BK II 56d 57 BK IV 136d

6 THUCYD ES *P l pon sian War* BK I 442 -443a

7 PLATO *Cr tylus* 96a b

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13 VI G L *Aeneid* BK III [70- 83] 154b K IV [474-52] 180a 181b BK VI [12 235] 216b 217b

14 PLUT RCH *Sol n* 68a d

15 TAC TUS *H stori* BK IV 282d 283a

18 AUGU TIN *C f sio s* BK I P 7 18 5b-d K IV par 8 21 b K IX par 2 64d 65 / *C ty f G d* K X CH 9 10 303d 305b CH 26-28 314d 316d K X C 7 362d 363b BK XX CH 16 573b 574a

20 AQUINA *S mma Theol gica* PA T I Q 8 A I N 163 164d Q I 2 A 5 AN nd P 3-9 283 292c Q I 3 A 3 R I 362 363 P T II Q A R 5 436b-437d PART I Q 60 A 6 ANS 851b 852b Q 65 A AN a d R P 3 879c-881d ART III SUPPL Q 7 A 9 REP 3 910d 912b

21 DANTE *D ine C medy* H LL IV [23 42] 5c d PURGATORY I 53a 54 XXVI XXVIII 94c 105d passim PARADISE X X [58-85] 135 d XXX [1 105] 151d 152d XXXI [61-84] 155b

22 CHAUCER *Pa son s Tale* 495a 550a esp par I 22 495a 510b par 85 I 3 543a 550a

23 HO BES *Levi than* PART II 206c 207a 211c 212b 244d 245a

29 CERVANT S *Don Quixote* PART I 427d 429d

32 MILTON *Paradise Lost* BK XII [436-445] 328b 329a

33 PAS AL *Provi cial Letters* 71b 80b / *Pensees* 87 344a b 923 351b

36 STERN *Tristram Shandy* 221a 224a

37 FIELDING *Tom Jones* 89a-c

40 GI ON *Decl ne and Fall* 191b 199b 297d

41 G BON *D cline and Fall* 384b 385b 664c d [n 53]

46 H G L *Phil phy of History* PART I 238c d PART IV 332b 333b

51 TOLSTOY *War a d P a e* BK IV 183 d

2g Prof nat ons and sacrileges

O D T STAMENT *Exodus* 20 1 24-26 19 10-13 2 24 / *Levit cus* 7 18 1 10 17 1-9 18 21 19 5-8 12 20 2 3 .1-22 24 10 16 / *Numbers* 15 32 36 18 32 / *Deuteronomy* 5 6-14 23 1 4 / *I S muel* 2 12-7 17 pa s m 2 1-6—(D) *I Kings* 2 12-7 17 passim 21 1-6 / *II S muel* 6 6-7—(D) *II Kings* 6 6-7 / *I K ngs* 21 9 3—(D) *III Kings* 1 9-13 / *I Ch nicl s* 13 9- 0 15 2 13—(D) *I Pa al p menon* 13 9- 15 2 13 / *II Chro cles* 26 6- 1 36 14 21—(D) *II Pa l p men n* 26 16 1 36 4 21 / *N hem h* 13—(D) *II Esd* 13 / *Job* 9-11 9-10 / *P lms* 74 10 18—(D) *Psalms* 73 18 / *Pr verbs* 30 9 / *I i h* p ssim esp 1 1 31 28 1-29 36 13-37 38 43 22 8 47 15 5 5 56.2 57 1-59 1 65 -7 66 3 4 66 17—(D) *Is ias* pass m esp 1 31 28 1 29 36 13 37 38 43.22 8 47 15 52 5 56.2 57 1-59.21 65 1 7 66 3 4 66 7 / *Jeremiah* p im sp 2 1 3.25 5 2 5 12 6 15 7 1-34 8 12 3 7 14 1 12 17 2 - 27 -3 9-40 27 14 5 29 8-9 34 15 16 36 - 32 42 2 44 1 30—(D) *Jeremias* pa sim esp 2 1 3.25 5.2 5 6 5 7 -34 8 13 27 14 10 12 7 1-27 3 9-40 7 4 5 29 8-9 34 15 16 36 1 3 42 44 3 / *E.ek el* passim esp 5 5 11 6 7 9 7.24 8 1-9 1 1 4 21 3 -14 6 5 59 20 1-49 22 8 2:24 3 23 1 49 28 8 35 9-14 36 16-24 39 7 43 7-8 44 5 13—(D) *E.echiel* p ssim esp 5 5 1 6 11 7 9 7.24 8 1-9 1 11 14 1 13 4 1 16 15-59 2 1 49 22 8 22.-4 31 23 1-49 28 8 35 9-14 36 16-24 39 7 43 7-8 44 5 3 / *Da el* 5 4 23 30-3 / *H a* passim—(D) *O pas m* / *Am* 2 6-8 / *Zepha h* 3 4—(D) *Soph as* 3 4 / *M lach* esp 7- 3 —(D) *M la h as* esp 1 7-13 o-

(2 *The virtue and practice of religion piety as justice to God 2g Profanations and sacrileges*)

APOCRYPHA *Wisdom of Solomon* 1 6-7 14 22-31—(D) OT *Book of Wisdom* 1 6-7 14 22-31 / *Ecclesiasticus* 23 7 15—(D) OT *Ecclesiasticus* 23 7 20 / *I Maccabees* passim esp 1 20-2 48 4 38 46 7 41 42 9 54-56—(D) OT *I Machabees* passim esp 1 20 2 48 4 38 46 7 41 42 9 54 56 / *II Maccabees* passim esp 5 15 18 6 1-9 8 1-4—(D) OT *II Machabees* passim esp 5 15 18 6 1-9 8 1 4

NEW TESTAMENT *Matthew* 5 34 35 9 2-6 12 1 15 16 18 20 21 1 13 26 63-67 / *Mark* 2 5-7 23 28 3 28-29 11 15 17 14 61-65 / *Luke* 6 1 10 19 45 46 / *John* 2 13 16 10 33 36 / *Acts* 8 9-24 21 26-30 / *I Corinthians* 11 7-34 / *I Timothy* 6 1 / *II Timothy* 3 1-2 / *Titus* 2 5 / *Revelation* 13 1-6 16 8 11 21—(D) *Apocalypse* 13 1-6 16 8 11 21

5 AESCHYLUS *Suppliant Maidens* 1a 14a c esp [418 479] 6a 7a [748 929] 10d 12d / *Persians* [709-842] 22c 24b / *Agamemnon* [320 398] 55 56b [681 715] 59b c [905-957] 61c 62b

5 SOPHOCLES *Oedipus the King* [863 910] 107b-c / *Antigone* 131a 142d esp [441 470] 134d 135a / *Ajax* [748 783] 149c d [13 6-1421] 154b 155a c / *Electra* [404 471] 159b d / *Philoctetes* [1423 1444] 195a c

5 EURIPIDES *Bacchantes* 340a 352 c

5 ARISTOPHANES *Clouds* [1464 1510] 506c d / *Frogs* [354-371] 568b c / *Thesmophoriazusae* [574 729] 606d 608c / *Plutus* [6 7 747] 636d 637d

6 HERODOTUS *History* BK I 4d 36b c BK II 70d 71a 78d BK III 92c 93a 95c BK V 173d 174b 176c d BK VI 200c d 203a b 204d 205a 211b c BK VIII 283d BK IX 313a 314a

6 THUCYDIDES *Peloponnesian War* BK I 380a d BK II 400c d BK III 434c-435a BK V 471b 472a BK VI 516b c

7 PLATO *Phaedrus* 122d 123a / *Phaedo* 220a c / *Republic* BK II 321a 324c / *Laws* BK VI 719c d BK IX 743a 744a

13 VIRGIL *Aeneid* BK I [219 69] 153a 154b

14 PLUTARCH *Numa Pompilius* 54c 55a / *Alcibiades* 162d 165b / *Coriolanus* 185b 186a / *Marcellus* 255a d / *Caius Marius* 350a b / *Lysander* 357 b / *Agesilaus* 483a b / *Caesar* 580b 581b / *Phocion* 615b d / *Cato the Younger* 639d / *Demetrius* 729d 731a 734b 735 / *Dion* 801b c

20 AQUINAS *Summa Theologica* PART II II QQ 13 14 444b-452a

21 DANTE *Divine Comedy* HELL XIV [1 72] 19c 20b XIX [1 3] 26d 28a PARADISE X [127 142] 120 X II [1 8 13] 134d 135a

22 CHAUCER *Parson's Tale* par 35 38 520b-522b

23 HOBBES *Leviathan* PART I 90d PART II 163 b PART II 180b-c

30 BACON *Advancement of Learning* 100d

32 MILTON *Lycidas* [108 131] 30a b / *Samson Agonistes* [433-447] 349a

33 PASCAL *Provincial Letters* 94a 97a

36 STERNE *Tristram Shandy* 256a b

38 MONTESQUIEU *Spirit of Laws* BK XII 8 d 86a

40 GIBBON *Decline and Fall* 180a 353a 357b 358a

41 GIBBON *Decline and Fall* 42b 379b-c 380c d

43 MILL *Liberty* 307d 309a

52 DOSTOEVSKY *Brothers Karamazov* BK III 64c 67a

3 The religious life religious offices and the religious community

3a The Jewish conception of the religious community the Torah and the Temple

OLD TESTAMENT *Genesis* 13 14 17 15 1 18 17-19 22 15 18 26 1-6 27 22 29 2 32 24 28 48-49 / *Exodus* passim esp 2 3 3 22 4 18-31 6 1 8 12 31 13 22 19 5 6 20 1 17 25 1-31 18 35 1 40 36 / *Leviticus* passim esp 18 1-5 26 1 45 / *Numbers* passim esp 4 12 23 28 1-33 29 / *Deuteronomy* passim esp 4 12 23 28 1-33 29 / *Joshua* 1 8 15 3 4 22 1-6 24 14 28—(D) *Josue* 1 8 15 3 4 22 1-6 24 14 28 / *I Samuel* 8—(D) *I Kings* 8 / *II Samuel* 6-7—(D) *II Kings* 6-7 / *I Kings* 5 1 9 9—(D) *III Kings* 5 1-9 9 / *II Kings* 11 17 17 35 8 17 25 8 15—(D) *IV Kings* 11 17 17 35 8 15 / *I Chronicles* 13 15 17 22 1 29 10—(D) *I Paralipomenon* 13 15 17 22 1 29 10 / *II Chronicles* 2-7 24 4 14 29-31 33 8 34 1 35 19 36 14 21—(D) *II Paralipomenon* 2 7 24 4 14 29 31 33 8 34 1 35 19 36 14 21 / *Ezra* passim—(D) *I Esdras* passim / *Nehemiah* 1 5-9 8-9—(D) *II Esdras* 1 5-9 8-9 / *Esther* 3 8 4 17 7-9 / *Psalms* passim esp 5 7 23 1 6 27 1 14 33 12 40 8 10 44 1 26 50 1 7 65 4 68 1 35 78 1 72 79 1 13 81 1 16 84 1 12 89 15 37 105 1 106 48 111 1 119 1 176 122 1-9 124 1-8 126 1-6 135 1 18 135 1 137 9 138 2—(D) *Psalms* passim esp 5 8 22 1-6 26 1 14 32 12 39 8 10 43 1 26 49 1 7 64 5 67 1 36 77 1 72 78 1 13 80 17 83 1 13 88 16 38 1 4 1 105 48 110 1 1 8 1 176 121 1-9 123 8 125 1 7 13 1 8 134 1-136 9 137 2 / *Proverbs* 6 23 / *Isaiah* passim esp 2 2 3 14 1 3 30 18-26 35 1 1 40 1 2 42 1-6 43 1 12 43 22 8 44 1-5 44 21 46 3 4 49 1-50 11 54 1 17 56 1 60 1-63 19 65 1-66 24—(D) *Isaias* passim esp 2 2 3 14 1 3 3 18 26 35 1 10 40 1 2 42 1-6 43 1 12 43 22 28 44 1-5 44 21 46 3-4 49 1-5 11 54 1 17 56 1 7 60 1-63 19 65 1-66 24 / *Jeremiah* passim esp 2-5 7 1 7 28 34 11 1 23 17 12 13 18 1 10 26 1 30 1 35 19—(D) *Jeremias* passim esp 2-5 7 1 7 7 28 34 11 1 23 17 12 13 18 1 6 7 30 1 35 19 / *Lamentations* 2 7 / *Ezekiel* passim esp 8 6-18 11 15 2 16 1-63

20 49 23 38-39 33 1 37:28 40 1-43 27—(D) Ezechiel pas m esp 8 6-18 11 15 0 16 1-63 20 49 23 38 39 33 37:28 40 1-43 27 / Hos passim sp 11—(D) Osee pass m e p 11 / Amos p ss m esp 3 1-2 / Jo h 2 4—(D) Jonas 2 5 / Micah 4 1-2—(D) Mi heas 4 1 - / Habakkuk 2.20—(D) Habacuc 2 20 / Zepha h passim esp 3 8-20—(D) Sopho as pas m esp 3 8-20 / Hagga —(D) Aggeus / Zechar ah passim esp 2 10-13 6 12 15 8 9-23 4.20 2 —(D) Za laria passim esp 2 10 13 6 12-15 8 9-23 4.20-21 / Mala hi p s sim esp 1 1 3 3 1—(D) Malachias p ssim esp 1 1 3 3 1

APOCRYPHA T b t 14 4-9—(D) OT T bi s 14 6 11 / Jud th 4-5 7 19 10 10 13 16—(D) OT Jud th 4 5 7 18 10 0 3 6 / Wisdom of Solomon 9 8—(D) OT B ok of Wisd m 9 8 / Ec les asticus 9 15 17 11 2 19 2 24 4 23 39 1 11 42 1 2 44 9-45 5 49 12 50 21—(D) OT Ecclesiasticus 9 12 17 9- 7 19 8 2 24 3 33 39 -15 42 1 2 44.20-45 6 49 14-50 23 / Ba ch 2:26—(D) OT Baruch 2.26 / I Mac bees 1-9 pa im—(D) OT I Mach bees 1-9 passim / II Maccab es pa s m esp 3—(D) OT II M chabees pas m esp 3

15 TACITUS Histo es BK V 295d 296 297d 298a

18 AUGUS INE C ty f G d BK IV CH 34 206d 207a c BK XVI C 1 16 433 434a CH 8 434c CH 21 8 435a-440b p s im CH 32 441c 442c K XVII CH 7 458 459d BK XIX CH 22 525b

19 AQUIN s S mm Theologic PART I Q 1 A 4 R P 2 126c 127c

20 AQUINA S mma Theologica RT I II Q 98 A 4-5 242b 244b Q 99 AA 3-5 247a 250 Q 1 1 A 4 AN and R 4 269 270b Q 102 A 4 276d 283 A 6 292 298a QQ 104 105 304 321a

23 HOBBES Levi than PART I 82d-83a PART II 137d 138a 160b-c ART III 177c 180d 182d 186c 198b 199b 204a PART IV 269a

32 MI TON Par d s Lost BK XII [101 269] 321b 325 [3 5 356] 326 327a

33 PA CAL Pense s 610-6 2 280b 282b 6 9-641 284b 290 713-7 8 304b 308b

40 GI B De l e nd F II 179d 183a esp 180 181 208 c 352c 354d esp 354 b

46 H G L Ph l ophy of H story PART I 245d 247b PART II 305b c PART IV 322a b

3b The Ch st n conc pt on of the church the doctrine of the myst cal body of Ch ist

OLD T T M NT S g f S lom (D) Ca t le f C t cles

NEW T TAMEN M tthew 4 18- 2 5 38 48 8.21 2 9 35-10 42 3 16 8 9 4 8 15-2 19 19 0 5 28 34 4 24 4 25 8 16- 0 / M k 4 45 28-34 13 1 16 14 / L k 4 43 44 6.27 38 9 - 6 6 5 37 1 2 2 .24 3 4.47 / J h 4 34 38 10 13 31 17 26 2 .20-23 21 15 17 / Acts pass m esp 1 8 2 1 47 4 32-5 11 16 -40 14- 5 / Romans esp 1 8 16 2 5 4.25 8 14 17 9 1 11 14 12 1 15 7 / I Co rinthian esp 4 9-13 10 16 17 1 :28 29 13 1-13 15 1 11 / II Corinthians pass m esp 1 5-9 / Galatians 1 9 esp 1 15 16 3 4 5 4 5:22-6 2 / Ephe ians esp 1.2 -23 3 8 12 4 1 5 5:23-33 / Phil ppians 1 27- 4 / Coloss a s esp 5 3 3 12 15 / I Thessa lonians 4 9-1 / H breus 3 5-6 10:24 25 13 1 3 / James 2 8 17 / I Peter 1.2 2 1 0 / I J hn / II J hn

18 AUGUSTIN City of God BK I CH 35 149b c BK X CH 20 311b BK XI XXII 322b d 618d esp BK XIII H 21 371 c BK XVII CH 9 461b d CH 11 462c 463a CH 15 16 465b 466d CH 20 469a 470c BK XVIII C 1 47-5 500d 502d BK XX CH 7 1 535b-541d K XXII CH 18 603c 604b / Ch ist an Doct ine BK I H 16 628c d CH 18 628d 629a BK III CH 31 32 669 670a

20 AQUINAS Summ The log a PART I 1 Q 1 2 A 4 R P 4 276d 283c P RT II Q AA 9-1 388d 390d Q 2 AA 5-8 394b 398b Q 5 410a-413c QQ 183 189 625a 700d PA T III Q 8 756c 763b ART III UPPL, Q 71 AA 9- 1 910d 914b Q 95 1042c 1049d esp A 3 AN d REP 4 1045b 1046d A 4 R 5 1046d 1047d Q 99 A 4 1083a 1084a

21 DANTE D ne Comedy URGATORY IX [73-145] 66 67b XVI [-8 1 9] 77 78a XIX [127-141] 82d 83a XXIX 97d 99b XXXII XXXIII 102b 105d PARADIS XXIII XXIV 141b 144b XXVII [-66] 147b 148a XXX [10] XXXII [144] 15 d 156a

23 HO Leviatha PART 151a ART I 198 199a 204a 207b PART IV 247a 249b 275a 278d

33 PASCAL Pen e 473 484 256b 258b 646 291b 857-861 342 867-905 343b 349a

35 LOCKE T lerat on 4b 5d

38 ROUSSEAU Social C tr ct BK IV 436a 438c

46 H GEL Ph l s phy of H tory PART III 307b 310 ART V 315d

52 DOSTO V KY B thers Ka am BK V 129c 135a

54 F UD Group Py l l gy 674 d 691d 692a

3c Th n ture and o g nizat on of the reli g ou commun ty

3 (1) The institut on of the priesthood and othe e clesi t cal offices

OLD T TAMEN Genesis 14 8 2 /Ex du 28 29 3 17- 3 39 4 12 15 / cus p im esp 4 3 12 7 5 8 1 0 2 6 1 34 21 1 2 6 4 -9 / Nu 54 3-5 6 1 16-27 8 28 16 9 7 23 29 2 35.24 3 / Deuteron 9 7 8- 3 8 5-7 2 1-

(3c *The nature and organ zat on of the relig ous community* 3c(1) *The institut on of the pr esthood and other ecclesiast cal offices*)

4 33 8 11 / *Joshua* 3 3 6-17 4 1-18 6 1 20 8 33 19 51—(D) *Josue* 3 3 6-17 4 1 18 6 1-20 8 33 19 51 / *I Samuel* 2 12 17 27 36 4 10 18 21 1-9 22 9-21—(D) *I Kings* 2 12-17 27 36 4 10 18 21 1-9 22 9-21 / *II Samuel* 15:24-29—(D) *II Kings* 15.24-29 / *I K gs* 8 1-11 12 30-32 13 33 34—(D) *III K gs* 8 1 11 12 30-32 13 33 34 / *II Kin s* 12 4-10 16 10-16 17.26-28 32 22 3 14 23 4-9 20—(D) *IV Kings* 12 4 10 16 10-16 17.26 28 32 22 3 14 23 4-9 20 / *I Chronicles* 15 11 27 16 4 6 37 42 23 26—(D) *I Paralipomenon* 15 11 27 16.4-6 37 42 23 26 / *II Chronicles* 5 7 6 8 14 15 11 13-15 13 9-12 15 3 19 8 11 23 1 24 16 29-31 34.8-15 35 1-9 36 14—(D) *II Paral pomenon* 5 7 6 8 14 15 11 13 15 13 9-12 15 3 19 8 11 23 1-24 16 29-31 34 8 15 35 1-9 36 14 / *Ez a* 1 -5 2 6-12 passim esp 6 16-20 7 24 25 8 24 30—(D) *I Esd as* 1 1 5 2 6-12 passim esp 6 16-20 7.24 25 8.24 30 / *Nehemiah* 8 10 37 39 12.27 47 13 4-11 28 31—(D) *II Esdras* 8 10 37 39 12 27 46 13 4 11 28-31 / *Psalms* 110 4—(D) *Psalms* 109 3 / *Isaiah* 61 6 66.20-21—(D) *I a as* 61 6 66 20 21 / *Jeremiah* 2 8 5 30-31 6 13 8 10 18 18 23 1-4 11 33 18 22—(D) *Jeremias* 2 8 5 30 31 6 13 8 10 18 18 23 1 4 11 33 18 22 / *Lamentat ons* 4 13 16 / *Ez kiel* 7.26 22.26 34 44 9-31 45 4-5 48 10-11—(D) *Ezechiel* 7 26 22:26 34 44 9-31 45 4-5 48 10-11 / *H sea* 4 4 10—(D) *Osee* 4 4 10 / *Micah* 3 11—(D) *Mi heas* 3 11 / *Zephaniah* 3 4—(D) *Sophonias* 3.4 / *Haggai* 2 11-13—(D) *Agg us* 2 12 14 / *Zechariah* 3 6 9-13—(D) *Zacharias* 3 6 9-13 / *Malachi* 1 6-2 9—(D) *Malach as* 1 6-2 9

APOCRYP IA *Eccles asticus* 7.29 31 45 50—(D) OT *Ecclesi sticus* 7 31 33 35 45 5 / *I Macc be s* 2 54 4 42-53—(D) OT *I Machabees* 2 54 4 42-53 / *II Maccabees* 1 19-32 3 p ss m 4 7 29—(D) OT *II Machabees* 1 19-32 3 passim 4 7 29

NEW TESTAMENT *Matthew* 12 3-5 16 18 19 26 57-65 / *Ma k* 2.25 26 14 53-64 / *Luk* 6 3 4 22 52-53 63-71 / *John* 18 19-24 / *Acts* 1 15 26 6 1-8 14:22 23 20 28 35 23 -5 / *I Tim thy* 3 5 17 22 / *II Timothy* 1 3 / *Titus* 1 / *Hebrew* 2 17 3 2 4 14 5 1 6 8-9.28 10 11 12 19-22 / *I Peter* 2 5 0 5 / *Revelat on* 1 5-6 5 9-10 20 6—(D) *Apoc lypse* 1 5-6 5 9-10 20 6

6 HERODOTUS *H story* BK I 32d 33a BK II 56d 57a 60d 61b BK IV 125a b 135b 136a BK V 167d 168b 171d 172a 173d 174b BK VI 197d 198a 200d 211b d BK VII 242d 243a 250 d BK VI I 278c 284d 285b BK IX 295d 296c 308a c

7 PLATO *Statesman* 597c 598a / *Laws* BK VI 700d 701b BK XII 787b-c

9 ARISTOTLE *Politics* BK VI CH 8 [1322b19-29] 526c BK VII CH 9 [1329a26-34] 533d

12 EPICTETUS *Discourses* BK I CH 16 122c d

13 VIRGIL *Aeneid* BK II [108 136] 127a b [162-233] 128b 130b BK III [356-462] 157a 160a BK V [700-718] 205b 206a BK VI [33 101] 212a 213b BK VIII [280-305] 266b 267a

14 PLUTARCH *Numa Pompilius* 53d 56c / *Camillus* 110b d

15 TACITUS *Annals* BK IV 67d 68a / *Histories* BK IV 285d 286a 287a b

18 AUGUSTINE *City of God* BK XVII CH 4 451c d CH 4-6 455b 458a

20 AQUINAS *Summa Theologica* PART I II Q 91 A 5 CONTRARY 211c 212c Q 98 A 5 REP 1 3 243c 244b Q 103 A 1 REP 3 298b 299b A 2, ANS and REP 1-2 299b 300d PART II II Q 1 A 10 389d 390d Q 11 A 2 REP 3 439a 44 b Q 184 AA 5-8 633c 639b Q 185 639c-650b Q 187 A 1 663c 665a Q 189 A 7 695d 696c PART III Q 22 827c 833a Q 26 A 1 REP 1 845b 846a Q 64 870b 879c Q 65 A 1 ANS and REP 3 879c 881d A 2 ANS and REP 2 881d 882c A 3 ANS and REP 2 882d 883d A 4 ANS and REP 3 883d 884a c

21 DANTE *Di ine Comedy* PURG TORY IX [73 145] 66c 67b

22 CHAUCER *Prologue* [477-528] 167b 168a / *Prologue of Pardoner s Tale* 372a 374a / *Pardoner s Tale* [12 829-902] 381b 382b

23 HOBBES *Leviathan* PART I 83a-84c PART III 177c 180d 182d 186b 199 200b-203b 205a 207b 240a PART IV 248b-250c 266a-c 272d 273a 273d 274a 275a 278d

24 RABELAIS *Gargantua and Pantagruel* BK II 119b 122a passim BK III 186d 188c 195d 196b 219b 222b BK IV 273c 274b 285c 297b

30 BACON *Ad ancement of Learning* 7d

32 MILTON *Lycidas* [108 131] 30a b

33 PASCAL *P ovincial Letters* 160b-163b

35 LOCKE *Human Understanding* BK I CH III SECT 12 115c d

38 MONTESQUIEU *Spirit of Laws* BK XXV 209d 210b

38 ROUSSEAU *Social Contract* BK IV 436c

40 GIBBON *Decline and Fall* 82c d 194c 195a 197 b 200b-c 300d 301c 350b d 457d 458b

41 GIBBON *Decl ne and Fall* 226d

44 BOSWELL *Johnson* 189a 196a c 218c 220d 313d 316d 466b-467c

46 H GEL *Ph losophy of History* P RT I 224a 227d 241a b PART III 310a-c PART IV 33 b 333b

48 MELVILLE *Moby Dick* 30a 36b esp 35a 36b

52 D STOEVSKY *Brothers Ka amazov* BK V 127b 137c pass m BK VI 164a 165a BK VII 171a 180a pass m

3c(2) Ecclesiastical government and h erarchy

OLD TESTA ENT *Levit cus* 21 10–15 / *Numbers* 3 5–10 / *I Ch o icles* 23 4—(D) *I Paralı pomen* 23 24 / *II Ch cles* 19 11—(D) *II P ral pom n* 19 11

N w TESTAMENT *Matth (* 16 18–19 8 18 20:25 28 28 18 20 / *Ma k* 10 42 44 13 34–3) / *Luke* 2:24 3 / *Acts* 1 1 26 5 30–31 6 1–6 13 1 3 15 1 3 17 7 14 15 2 28–35 23 -5 26 9–12 / *I Timothy* 3 / *Titus* 1 esp 1 5 / *H brews* 1 -8 3 1 4 14–5 10 6 19–10.21 13 7 / *Revel t on* 11 15 17 14—(D) *Apo alypse* 1 15 17 14

7 PLATO *Laws* BK XII 787b-c

20 AQUINAS *Summa Th l gica* PART II II Q 1 A 1 389d 390d Q A 6 395b 396a Q 11 A 2 REP 3 439a 440b PART 1 1 Q 65 A R 3 879c 881d

21 DANTE *Dıvı e Com dy* HELL, XXVII [67 32] 40 -41 PURGA ORY XIX [127 141] 82d 83a

23 MACHIAVELLI *Prince* H XI 16d 17d

23 H BB S *Levi than* P RT III 178 180a passim esp 179 198 199a 207b 240a PART IV 248 249b 266a-c 273c d 275a 278d

24 RABELAIS *Garg tua and Pantagruel* BK IV 288d 297b

30 B CON *Advan ement of Le rning* 101a

32 MILTON *New F cers of Con ienc* 68a b

33 PAS AL *Pense s* 871–877 344b 345a 885 346a

35 LOCKE *Tolerat n* 4 6a 7c 8

38 ROU EAU *S ci l Contr t* BK IV 436d [fn 1]

40 GIB ON *De lın and F ll* 194a 197b 299b-300d 302b 303 304a d 642d 643a

41 GI BON *De l and Fall* 154 b 214 215c 517a d 567 569d 582 586a passim 589b d

44 B SWE L *J hns n* 173b 342a b

46 HEGEL *Ph lo ophy f History* PART I 224a 227d PART I 310a c

3 (3) The s pport of eccl i stical n t tu tion tithes contribution state bs dy

OLD TE TAMENT *Genes s* 14 8 2 28 18 2 47:22 6 / *Exodu* 3.2 12 3 22 29–3 23 18 9 5 -9 29 7 34 3 1 6 34 9 0,25 26 35.4 36 7 / *Let ticus* 2 5 3 6 16- 8 24 30 7 6–15 30 36 8 31 10 1 2 14 13 2 13 23 passim 4 5–9 5 32 34 27 / *Numbers* 3 2 13 5 9–10 7 passim esp 7 3–9 8 8–32 31 25–54 35 -8 / *Deuter omy* 10 8–9 12 5–6 19 14:22 9 16 16– 7 18 -8 6 1 6 / *J shua* 3 14 33 14 3–5 18 6–7 2 —(D) *J s e* 3 14 33 14 3–5 18 6–7 21 / *I Samu l* 3 7—(D) *I King* 13–17 / *II Kings* 2 2 3–7—(D) *IV King* 2 22 3 7 / *II Ch o cl* 24 4 4 31 3 34 8–13—(D) *II Pa l pomen n* 24 4 4 3 3 12 34 8– 3 / *Ezr* 8 24 30—(D) *I E d s* 8.24 30 / *N hem h* 32 39 2.44.47 3 5 2 —(D) *II E d as* 10 3 39 2 43 46 13 5 / *Proverbs* 3 9–10 / *I a ah* 66.20– 1—(D) *Isaias* 66:20–21 / *Ezeki l* 2 40–41 44 27–31 45 1–6 48 8 21—(D) *E.ech l* 20 40 41 44.27–31 45 1–6 48 8–21 / *Malachi* 3 8 10 —(D) *Malachias* 3 8 10

APOCRYPHA *Tobit* 1 6–8—(D) OT *Tob as* 1 6–8 / *E cl s sticus* 7 31 35 8–11 45:20– 2—(D) OT *Eccl s asticus* 7 33 35 35 10–13 45 25 27

N w TESTAMENT *M tthew* 23.23 / *Luke* 11 42 18 12 / *I Corinthians* 9 13 14 / *Hebrews* 7 1–1

9 ARISTOTLE *Polıtı s* K II CH 8 [1267^{b}30–36] 463 CH 10 [1 7 18– 1] 468c d BK VI CH 10 [1330 8 14] 534c CH 12 [133 ^{b}4 7] 536a

20 AQU NAS *Summa Theologica* PART II Q 18) A 7 647 649b Q 187 AA 4–5 669b 673b PART III Q 6) A 1 REP 7 879 881d

22 CHAUC R *Prologu* [692–714] 171a b / *S im m ner s Tale* 285a 295a / *Pr l gue of Pa d ner s Tale* 372a 374a / *Pard er s Tale* [12 829–902] 381b 382b

23 HOBBES *Levi than* PART III 223a 224c PART IV 248d 249 278c

24 RAB LAI *Garga tua and Pant gruel* K II 99 100a BK IV 295d 296a

26 SHAKESPEAR *Henry V* ACT I SC 1 533a d

38 MONTESQUI U *Spir t of Laws* BK XXV 210b 211a BK XXX 298b 302a

39 S ITH *W alth of Nat ons* BK I 56b 57a K V 343b d 356d esp 343b d 346c 347d 348a 357

40 G ON *De l ne and F ll* 82d 197b 198c 301c 302b 392c 393d 597a c

41 G ON *D line a d Fall* 417b-c

42 KANT *Scien e f R ght* 444a-c

44 BOSW LL *Johnson* 219b c 342 b

3d The monastic life the d cipline of ascet ici m

O D TESTAMENT *Numbers* 6 / *Judg s* 13 5 16 17 / *I S mu l* 1 9 12 9– 8—(D) *I Kings* 1 9 1 19–28 / *Am* 2 1 12

NE T STAMENT *M tthew* 3 1 4 4 - 6 25–34 19 10–12,21 / *Ma k* 1.2–6 12 13 10.2 / *Luke* 1 13 15 80 3 2 4 4 1 12 2 36 18.22 / *I Cor nth s* 7 1 7–8 25 40 / *II C ri thia s* 6 1 0

18 AUGU TINE *Confessions* K V pa 6 27 60b-c / *C ty f God* K I CH 6–18 139 140d

20 AQ INAS *Summa The log* A T Q 64 A 1 R 3 66d 67 Q 98 A 5 R 2 3 243c 244b Q 108 A 4 336b 337d PART II Q 184 A 5 633 634c AA 7–8 636a 639b Q 18) A 6 646c 647c A 8 649b 650b QQ 186–189 650b 700d PART III U PL Q 89 A 2 1006b 1007c

21 DANTE *Dı e Comedy* H LL, XX 1 [67 32] 40c 41 PARAD SE 1 109b-110 XI [28 39] 122b 123 X 1 [3 6] 124 125a

22 CH U R *Prol gu* [16 07] 162 b / *Fri s Prologue* 277 b / *F s T le* 278a 284 / *S mm er's Prol gu* 284b 285a / *Summoner s T le* 285 295

4a Religion in relation to forms of government the theocratic state

OLD TESTAMENT *Numbers* 2 12 23 / *Judges* 8 22-23 / *I Samuel* 8 10 18 19 24 12 12-14 17 19—(D) *I Kings* 8 10 18 19 24 12 12 14 17-19 / *Isaiah* 43 15—(D) *Isaias* 43 15 / *Daniel* 4 17 25 32—(D) *Daniel* 4 14 29
APOCRYPHA *Rest of Esther* 14 3—(D) OT *Esther* 14 3
7 PLATO *Statesman* 597c 598a / *Laws* BK VI 700d 701b
9 ARISTOTLE *Politics* BK II CH 8 [1267b3 36] 463c d BK III CH 14 [1285 3 7] 483a b BK V CH 11 [1314b35 1315 4] 517d BK VI CH 7 [1321 35- 1] 525 CH 8 [1322b19 29] 526c BK VII CH 8 [1328 2 22] 532d 533a CH 9 [1329b26-34] 533d CH 10 [1330 8 14] 534c CH 12 [1331 19-28] 535d [1331b4 7] 536a
20 AQUINAS *Summa Theologica* PART I II Q 99 AA 4-5 248a 250a QQ 104 105 304a 321a
23 MACHIAVELLI *Prince* CH XI 16d 17d
23 HOBBES *Leviathan* PART I 82b 83a PART II 111b 112c PART III 177c 180d 199b 204a 208d 228a-c
33 PASCAL *Pensées* 611 282b
35 LOCKE *Toleration* 14b-15a / *Civil Government* CH XVIII SECT 210 73b c
38 MONTESQUIEU *Spirit of Laws* BK II 7c 8c BK III 12d 13c passim BK V 27d BK XIX 138c 140c esp 139c 140a BK XXIV 201a 202b BK XXV 211c 212b 214a,c
38 ROUSSEAU *Social Contract* BK II 405d BK IV 435a-439c
40 GIBBON *Decline and Fall* 13b c 208a c
41 GIBBON *Decline and Fall* 202 d 252c 288 c 557c 563d passim esp 558b-c 561c 562b 563c d 586c 589d esp 589b d
43 MILL *Representative Government* 343a
44 BOSWELL *Johnson* 245c
46 HEGEL *Philosophy of Right* PART III par 355 112d 113a / *Philosophy of History* PART 207d 208c 216b 17 46d 247b PART IV 316c d 365b-c
52 DOSTOEVSKY *Brothers Karamazov* BK II 28b-32c

4b The service of religion to the state and the political support of religion by the state

7 PLATO *Statesman* 597c 598a / *Laws* BK VII 718d 720b BK XI 789a b
9 ARISTOTLE *Politics* BK I CH 8 [1267b30-3?] 463c d BK V CH 11 [1314b35 1315 4] 517d BK VI CH 7 [1321 35 b] 525a BK VII CH 8 [1328 22] 532d 533a CH 10 [1330 8 4] 534c
13 VIRGIL *Aeneid* BK [291 296] 111a BK XII [175 194] 358b-359a [829-84] 376a b
14 PLUTARCH *Numa Pompilius* 49a 61d esp 52d 53a 57b *Themistocles* 92a-c / *Camillus* 114c 116a / *Fabius* 142d 143a / *Marcellus* 247c 248b / *Lysander* 365a 366 / *Sertorius* 462a 466d 467a / *Cleomenes* 659d 660a
18 AUGUSTINE *City of God* BK I CH 1-6 129d 13 d CH 34 149a BK XIX CH 26 528d 529a
20 AQUINAS *Summa Theologica* PART II II Q 187 A 2 665a 666a Q 188 AA 2 4 675d 679d
23 HOBBES *Leviathan* PART I 80d 81a 82b d PART IV 258d
25 MONTAIGNE *Essays* 306a d 324c 326b
26 SHAKESPEARE *2nd Henry IV* ACT I SC I [187 215] 470a b ACT IV SC I [30-87] 487c 488a SC II [1 42] 489d-490a / *Henry V* ACT I SC I 533a d
29 CERVANTES *Don Quixote* PART II 290c
32 MILTON *Areopagitica* 397a
35 LOCKE *Toleration* 6b-7b 7d-8c 9c 10c 20d 21c / *Civil Government* CH XVIII SECT 210 73b-c
35 HUME *Human Understanding* SECT V DIV 43 468c
38 MONTESQUIEU *Spirit of Laws* BK II 8 BK III 13b c BK V 27d BK XVIII 134c d BK XXIV 200a 208a c BK XXV 212 b 214a c BK XXVI 214d 215a
38 ROUSSEAU *Inequality* 327a-c 358d 359a 366c d / *Social Contract* BK I 401c 402a BK IV 435a 439c
39 SMITH *Wealth of Nations* BK I 56b-5 BK V 343b d 346 347d 348a 357c
40 GIBBON *Decline and Fall* 13b-d 229c 230a 289b d 294a esp 291d 292d 328c 330a c 348 361a c esp 349c 351d 382a 383b 457b d-460b passim 601c d 611d-612a 631d 632a
41 GIBBON *Decline and Fall* 147d 148b 20 b-207a 352b 353b 381a 383c
42 KANT *Science of Right* 444 c / *Judgement* 509d 510a
43 ARTICLES OF CONFEDERATION III 5b
43 MILL *Liberty* 279a d 290c 291a / *Representative Government* 341a c 437d-438b
44 BOSWELL *Johnson* 189c d 251c 314c 315b 445b c
46 HEGEL *Philosophy of History* INTRO 176b 177b PART II 287a d 311b-d PART IV 350b-c 353a b
47 GOETHE *Faust* PART II [4897 4916] 121b 122a
51 TOLSTOY *War and Peace* BK VI 304c d BK IX 374d 377b BK X 435 436c 443b BK XI 534c d BK XII 572d 574a
52 DOSTOEVSKY *Brothers Karamazov* BK I 28b 32c BK V 127b 137c passim esp 133c 135a

5 The dissemination of religion

5a The function of preaching

NEW TESTAMENT *Matthew* passim esp 3 1 3 4 7 25 7-28 29 9 35 11 6 3 10 28 19 20 / *Mark* passim esp 1 2-8 1 2 3 13 5 6 7 13 3 9- 3 16 14 / *Luke* passim esp 4 16-2 4 43 44 8 9 -6 9 59 20 16 16 19 47 48 24 46-47 / *John* passim esp 6-8 1 15 42 8 20 / *Acts*

(5 *The dissemination of religion 5a The function of preaching*)

passim esp 4 18 20 5 19-20 8 4 12 8 27-37 9 15 10 42 43 13 23 24 13 38 13 44 47 14 1 15 18:24 28 20 16-21 26 16-18 / *Romans* 1 9-15 10 8 11-21 16 25 / *I Corinthians* 1 17 18 21 2 1-5 9 12.2 31 15 1 2 / *II Corinthians* 3 4 esp 4 3-6 / *Galatians* 1 1-2 9 esp 1 15-16 / *Ephesians* 3 / *Colossians* 1.23 29 3 16 4 3 4 / *I Timothy* 2 5 7 3 16 4 6-13 6 1-5 / *II Timothy* 1 8 11 2 2 24 26 4 / *Titus* 1 1 3 1 7 3 11 / *Hebrews* 4 1 11

18 AUGUSTINE *Confessions* BK I par 1 1a b BK V par 23 BK VI par 3 33c 36a BK VI par 6 36c / *Christian Doctrine* 621a 698a c esp BK IV 675a 698a c

20 AQUINAS *Summa Theologica* PART II II Q 6 A 1 ANS and RE 413d-414c Q 10 A 12 REP 5 436b 437d Q 18 A 3 REP 5 666a 669b Q 188 A 4 678b 679d PART III SUPPL, Q 96 A 7 1061b 1062a

21 DANTE *Divine Comedy* PARADISE XXIX [67 126] 151a c

22 CHAUCER *Prologue* [477-528] 167b-168a / *Parson s Prologue* [17 333 371] 494a b

23 HOBBES *Leviathan* PART III 205b d 207b 211c 215b 216b 219d 221b 224c 225d 241d 242a 242 d PART IV 273d 274a

35 LOCKE *Toleration* 7d 8c

36 STERNE *Tristram Shandy* 253b 268a 367b 368b

39 SMITH *Wealth of Nations* BK V 343b d 344b 352b-c

40 GIBBON *Decline and Fall* 303c 304a 529b-530b

41 GIBBON *Decline and Fall* 110b

46 HEGEL *Philosophy of History* PART IV 340d 341a

48 MELVILLE *Moby Dick* 30a 36b

51 TOLSTOY *War and Peace* BK VI 244d 245c

52 DOSTOEVSKY *Brothers Karamazov* BK I 13a d BK VI 150d 153d

5b Religious conversion

OLD TESTAMENT *Ruth* 1 18 / *II Kings* 5 1 15 —(D) *IV Kings* 5 1 15 / *Psalms* 51 3—(D) *Psalms* 50 15 / *Daniel* 2 4—(D) *Daniel* 2 1 3 23 3 91 4 34

APOCRYPHA *Bel and Dragon*—(D) OT *Daniel* 14

NEW TESTAMENT *Matthew* 9 2-8 15 30-31 18:2 3 27 50-54 / *Mark* 2 3 12 4 11 12 9 16-27 15 37 39 / *Luke* 2.8 20 5 18 26 7 11 16 13 11 13 17 11 19 18 35 43 22 32 23:44 47 / *John* 2:22 23 4 6 5 14 7 31 37 41 8:28 32 9 11-41 45 12 10-11 16.29 30 / *Acts* passim esp 2 38-47 3 19 8:25-9 20 11 19-21 13:4 43 14 1 6 14 15 16 25 34 18 7-8 22 1 16 26 9 2 / *I Corinthians* 14.24 25 / *Galatians* 1 13 19 / *Hebrews* 4 1-6 / *James* 5 19 20

18 AUGUSTINE *Confessions* BK I-IX 1a 71b esp BK I par 17 18 5b d BK III par 6-10 14b 15d, BK IV par 1 19b c par 7-8 20d 21b BK V par 12 13 30a c par 23 25 33c 34c BK VI, par 7-8 36d 37c BK VII par 24 50d 51a, BK VIII 52c 61c BK IX par 14 65a c

19 AQUINAS *Summa Theologica* PART I Q 6.., A 2 REP 3 318d 319c A 4 REP 2 320b 321b

20 AQUINAS *Summa Theologica* PART II II Q 10, A 8 432b-433b A 9 ANS 433b-434c A 12 436b 437d Q 11 A 4 441b-442b

21 DANTE *Divine Comedy* PURGATORY XX [55-93] 87a c

22 CHAUCER *Tale of Man of Law* [4933 4960] 244a [5100 5106] 246b 247a / *Second Nun s Prologue* 461a-463a / *Second Nun s Tale* 463b-4 1b

23 HOBBES *Leviathan* PART I 83d-84a PART III, 204a PART IV 264d 265c 266a

30 BACON *Advancement of Learning* 41b-c

33 PASCAL *Pensées* 189-194 205b-209b /69-70 323a

35 LOCKE *Toleration* 1a 2c 3b 3c-4a 7d 8, 10d 11a 13b 15a 15d 16a

37 FIELDING *Tom Jones* 165b d 379c 380a

39 SMITH *Wealth of Nations* BK V 343b d 344b

40 GIBBON *Decline and Fall* 179a d 180c 181c 189a b 200a 206b 296b-299a 599d 602b

41 GIBBON *Decline and Fall* 152c 161a c passim, esp 153c 155b 234d 245a 251d 252 285d 287c 345d 347a c

43 FEDERALIST NUMBER 1 30a

44 BOSWELL *Johnson* 174a b 3 2a b 394d 395b 536c

46 HEGEL *Philosophy of History* PART IV 32 c 323a

51 TOLSTOY *War and Peace* BK V 194a 203a 216d 218b BK XI 476c-480a

52 DOSTOEVSKY *Brothers Karamazov* BK V 127b-137c passim BK VI 153d 164a BK XI, 313 314c

5c Religious education

OLD TESTAMENT *Exodus* 12.24 27 18 19-20 24 12 / *Leviticus* 10 8 11 / *Deuteronomy* 4 1-5 9 10 14 5 31 6 1 6-9 20-25 11 18 21 17 9-10 24 8 31 9-13 / *Joshua* 8 30-35—(D) *Josue* 8 30-35 / *II Kings* 17.26-28 23 1 2 / *II Chronicles* 2—(D) *IV Kings* 17.26-28 23 1 2 / *II Paralipomenon* 17 7-9 34.29-30—(D) *II Paralipomenon* 17 7-9 34.29-30 / *Nehemiah* 8—(D) *II Esdras* 8 / *Psalms* 78 1 4—(D) *Psalms* 77 1 4 / *Ezekiel* 44:21 23—(D) *Ezechiel* 44:21 23

NEW TESTAMENT *Matthew* 5 7 10 1 31 11 23 / *Mark* 3 13 19 4 1 25 6 6-11 / *Luke* 2.46-49 6 12 49 8.4 18 9 1-6 / *John* 7 14 17 / *Acts* 22 3 / *I Corinthians* 12.27-31 / *Ephesians* 4 11 15 6.4 / *I Timothy* 1 5 7 2 5-7 3.2 4 6-13 6 1-5 / *II Timothy* 1 o 11 2 1 2 12 15 16 23 25 13 14 16 14 1-5 / *Titus* 1 7 3 11 esp 2 15 / *Hebrews* 5 11

7 PLATO *Laws* BK X 757d 771b BK XII 797c 798b
18 AUGUSTINE *Christ an Doctrine* 621a 698a c esp K IV CH 16 685d 686c
19 AQUINAS *Summa Th ol gica* PROLOGUE 1a b
20 AQUINAS *Summa Theologica* PART I II Q 10, A 4 AN 318b 321a Q III A I ANS 351d 352d AA 4-5 354c 356c PART II II Q 2 A 6 395b 396a Q 16 A 2 ANS and R P 455c 456d Q 181 A 3 618c 619b Q 188 AA 4-5 678b 681a A 6 ANS 681b-682c ART III SUPPL, Q 96 A 7 1061b 1062a A II ANS 1063d 1064d
21 DANT *Di e Comedy* PARADISE XII [2-105] 123d 124d
23 HO BES *Leviathan* PART II 123a b 154b-156b P RT II 208d 209b 211b-c 241d 242a PART IV 269a 278b c CON LUSION 282d 283a
24 RA ELAI *Garga tua and Pantagr l* BK I 24c d 27a BK II 82 83b
30 BACON *Adv ncement f Learning* 41c d
33 PASCAL *Pen ees* 18, 194 205a 209b 285 224a
35 LOCKE *Tolerati n* 7a b 7d 8c 17d 18a 18c
38 MONTESQUI U *Spirit f Laws* BK IV 15c K XXIV 202b c
39 S ITH *Wealth of N tions* BK V 343b d 356d esp 343b d 346c 347d 348a 348c d 352b-c 354d 355d 357c
40 GI BON *Decl n and F ll* 82d 355b d 601b
41 GI BON *D cl ne nd Fall* 522d 523a
43 M LL *Liberty* 285b 290a 292a passim / *Representative Go ernment* 437d-438b
44 BOSW L *J hnson* 151b d
52 DOSTO VSKY *B others K mazov* BK VI 150d 153d 164a 165a

5 Truth and fals ty in religion

5a The relig ou condemnat on of dolatry s perstit on and other perver ons of wor hip

O D TESTAM NT *Exodus* 20 5 22 23 2-20 23 13 3 34 11- 7 / *Lev t cus* 17 7 19 4 3 2 1-6 7 26 8 3 / *Numbers* 5 -5 16-18 33 51-5 / *D uter my* 4 14-28 5 6-9 6 14 5 7 1-5 , 26 8 9- 0 9 5 2 1 16- 7 28 12 2 3 9- 3 18 6-21 7 7 18 9- 4 2 2 16- 8 27 , 28 4-68 9 6 29 3 15 2 31 16-21 32 5 17 21 36-39 / *J shu* 22 23 24 4 25—(D) *J ue* 2 3 24 4 5 / *Judg* 2 10-23 3 5-8 6 24 32 8 33 34 1 17 18 / *I S m l* 7 3 4 5-22 3 —(D) *I K g* 7 3 4 , 22 3 / *I Ki gs* 3 4 9 6-9 1 6 18 6-4 22 28 2 5 9 2 5 53—(D) *III Ki g* 3 1 4 9 6-9 6 18 6-4 22 8 2 , 29 22 51-54 / *II King* pass m esp 18 8 16-9 0 1 36 1 17 18 14 4 5 18 37 19 16-19 21 24-2 —(D) *IV King* pass m esp 1 8 8 6-9 10 10 1-36 11 17 18 14 1-4 15 1 18 37 19 16-19 21 1 4-20 / *II Ch onicles* 1 1-8 13 6-9 15 8- 6 21 5 20 6 16-21 8 - 5,2 -25 33 1 13 34 3 7 36 11 21—(D) *II Pa al pomenon* 12 1-8 13 6-9 15 8 16 21 , 20 26 16-21 28 1-5 22 2, 33 1 13 34 3 7 36 11 21 / *Psalms* 81 8 14 97 7 106 1 5 1-8 135 5 18—(D) *Psalms* 80 9 15 96 7 1 , 113 1-8 134 15-18 / *Isaiah* 2 5 21 10 0-11 30 3 40 18 2 42 8 17 44 9-20 45:20-21 46 1 7 57 3-8 6, 3-5—(D) *Isa as* 2 5 21 1 10-11 30-31 40 8-20 42 8 17 44 9 2 45:20-21 46 1 7 57 3-8 65 3-5 / *Jerem ah* passim esp 1-13 16 19 3-5 23:20-39 25 4 7 44 1-3 51:44 52—(D) *Jerem s* passim esp 1 13 16 19 3-5 23:20-39 25-4 7 44 1 30 51 44-52 / *E ekiel* passim esp 5-6 14 16 20 22 23 36 16-26 37:23—(D) *Ezechi l* pass m esp 5-6 14 16 20 22 23 36 16-26 37:23 / *Da el* 3 6—(D) *Dan l* 3 1-23 9 -97 6 / *H sea* passim esp 2 8 13 4 12 13 8 1 14 13 1 2—(D) O ee passim esp 2 8 13 4 12 13 8 14 13 1 2 / *Amos* 2 4-16 4 1-5 5 e p 5:25 27 / *Nahum* passim esp 1 14 / *Habakkuk* 18 9—(D) *Habacuc* 2 18-19 / *Zeph niah* passim esp 1 4-6—(D) *Sophonias* passim esp 1 4-6

APOCRYPHA *Judith* 3 8 5:23-6.4 8 16- 8—(D) OT *Jud th* 3 3 5 19-6 4 8 6-18 / *Rest of E ther* 14 6- 0—(D) OT *Esther* 4 6- 0 / *W dom of Solomon* 12 15—(D) OT *Book of Wisd m* 12 15 / *Ecclesiasticus* 3 19 34 1-7 —(D) OT *Eccles asticus* 30 19- 0 34 1-7 / *Baruch* 6—(D) OT *Baruch* 6 / *B l and Drag n*—(D) OT *D niel* 14 / *I Mac be s* 1 41-2:28—(D) OT *I Mach bees* 1 43 28 / *II Ma bees* 2 1 2 6-7 12 39-45—(D) OT *II Machabees* 2 1 2 6-7 12 39-46

NEW T STAMEN *Matth w* 23 1-33 / *Acts* 7 39-44 8 9- 1 12 2 23 14 7 18 1,20,28 29 17 16-31 / *R mans* 2:22 / *I Corinthia s* 5 9-11 6 9 8 10 7 14-21 2 2 / *II Cor thians* 6 14 7 / *Galatians* 5 19-2 / *Eph i ns* 5 5 / *Ph lipp ans* 3 18 19 / *Coloss* 3 5 / *I The s lon an* 1 9 / *I P ter* 4 3 / *I J hn* 5:20- 1 / *Revelat n* :20 9.20 2 8 2 14 5—(D) *Apocalyps* 2- 9 2 8 22 4 15

6 HERODOTUS *Hi to y* K I 12d 13b K I I 95a-c
7 PLATO *Law s* K X 769d 771b
14 PLUTAR H *C m llu* 104d 105a / *P ricles* 123c 124a / *Alex der* 575a 576a / *D on* 781d 782a
15 T TUS *H sto s* BK V 296a
18 AUGUSTINE *City of G d* K I X 129 322 c BK XVIII CH 5-6 474d-475c CH 8 475d 476b CH 1 477d 478d H 8 480d 482 CH 4 485 b
19 AQU NAS *Summ The l g a* PA T Q 7 A 4 R P 3 103 104b Q 67 A 4 AN 352 354

(6 *Truth and falsity in religion* 6a *The religious condemnation of idolatry, superstition, and other perversions of worship*)

20 AQUINAS *Summa Theologica* PART I-II Q 98 A 2 ANS 240c-241b
21 DANTE *Divine Comedy* HELL, I [1-111] 1a-2b VII [1-60] 9c-10a XIX-XX 26d-29d XXVII [55-136] 40a-41b PURGATORY III [103-145] 57a-c XVI [58-129] 77c-78a XXXII [37]-XXXIII [78] 102d-105a PARADISE V [64-84] 112d-113a IX [109-142] 119d-120a XI [18-139] 123b-c XII [8 -126] 124c-125a XIII [118-136] 134d-135a XXI [121]-XXII [18] 139c-d XXII [61-96] 140b-c XXVII [1-66] 147b-148a XXIX [67-126] 151a-c
22 CHAUCER *Second Nun's Tale* [15,749-769] 466b / *Parson's Tale* par 63-64 530a-531a
23 HOBBES *Leviathan* PART I 51d-52b 78d-83a passim PART II 172b-d PART IV 247a-267a
24 RABELAIS *Gargantua and Pantagruel* BK I 53a-c
25 MONTAIGNE *Essays* 18d-20d 91b-c 152b-156d 209b-213a 246a-258b passim 497d-501c
30 BACON *Advancement of Learning* 101a-b / *Novum Organum* BK I APH 46 110b-c
32 MILTON *Christs Nativity* 1a-7b esp [165-228] 5b-7a / *Paradise Lost* BK I [331-621] 100b-107a BK XII [101-126] 321b-322a / *Samson Agonistes* [433-47] 349a-350a [871-902] 358b-359a [1139-1243] 364b-366b
33 PASCAL *Provincial Letters* 71b-80b 87a-88a 94a-97a
34 NEWTON *Optics* BK III 543b-544a
35 LOCKE *Toleration* 13b-15a
35 BERKELEY *Human Knowledge* SECT 94 431b-c
37 FIELDING *Tom Jones* 20a-c
38 ROUSSEAU *Social Contract* BK I 437a-c
40 GIBBON *Decline and Fall* 184b-185d 457b-d 458d-459c 460-463c 600d-601a
41 GIBBON *Decline and Fall* 195a-202a passim 207a-208 229c-230b 252b-c 328a-334c passim esp 329c-330b 334c
42 KANT *Judgement* 504b-505a
44 BOSWELL *Johnson* 173d-174a 301c
46 HEGEL *Philosophy of Right* PART I par 270 85b-c / *Philosophy of History* INTRO 196d-197d PART I 237d-238a 243d 245d-246c PART III 313c-d PART IV 322-c

6b Religious apologetics: the defense of faith

14 PLUTARCH *Coriolanus* 191d-192b
18 AUGUSTINE *Confessions* BK V par 23-25 33c-34c BK VI par 3-8 35c-37c / *City of God* 129a-618d esp BK I PREF 129a-d BK I C 36-BK II C 1-2 149c-151b BK IV C 1-2 188b-d 190 BK V PREF-CH I 230b-d 231a BK VI PREF 243b-d 244a BK VI CH 1 264b-d 265b BK X CH 32 322c BK X CH 1 322b-d 323a BK XV CH 1 397b-d 398a BK XVIII CH 1 47 b-d BK XX CH 1 530a-b BK XX CH 30-BK XXI CH 1 560a-d / *Christian Doctrine* BK IV CH 2 675d-676a CH 4-5 676d-677d
19 AQUINAS *Summa Theologica* PART I Q 1 A 8 7c-8d Q 2 A 2 REP 1 11d-12c Q 32 A 1 175d-178a
20 AQUINAS *Summa Theologica* PART II-II Q 2, A 10 399b-400b PART III SUPPL, Q 96 A 11 ANS 1063d-1064d
25 MONTAIGNE *Essays* 208a-294b esp 212a-215b 238c-239c, 250a-b 270a-271a 293d-294b
29 CERVANTES *Don Quixote* PART I 122b-c
30 BACON *Advancement of Learning* 41b-d, 101a-b
31 DESCARTES *Meditations* 69-71a-c / *Objections and Replies* 125d-126a
33 PASCAL *Pensées* 219-241 212-217b 289-290 224b-225a 430-609 245a-280b 803-858 328b-342a
35 HUME *Human Understanding* SECT X DIV 107 499c-500b
38 MONTESQUIEU *Spirit of Laws* BK XXI 200b-201a 202a-b
40 GIBBON *Decline and Fall* 206a-b 348d-670b-c
46 HEGEL *Philosophy of History* PART III 309a-d

6c The unity and tradition of a religion

6c(1) Orthodoxy and heresy: the role of dogma in religion; the treatment of heretics

NEW TESTAMENT *Acts* 4:1-22 5:14-42 6-8:3 9:1-25 esp 9:1-2 9:22-25 13:4-7 15:1-31 17:5-14 18:12-16 21:26 passim / I *Corinthians* 1:10 11:18-19 / *Galatians* 1:5-9 5:19-20 / *Titus* 3:10-11 / II *Peter* 3:16 / II *John* 9-11
18 AUGUSTINE *Confessions* BK II par 10-15 15b-18b esp par 18 18b par 19 b BK V 27 34c passim BK VII par 25 51a-c / *City of God* BK XVI CH 2 422b-d BK X III CH 51 502d-503d / *Christian Doctrine* BK I, CH 39 670b-c
19 AQUINAS *Summa Theologica* PART I Q 28 A 1 CONTRARY 157c-158d A 3 CONTRARY 160a-c Q 31 A 2 ANS 172b-173c
20 AQUINAS *Summa Theologica* PART I-II Q 64 A 4 REP 3 69b-70a Q 81 A 1 A 5 163 164d PART II-II Q 1 A 9 REP 2-4 388d-389d A 10 ANS and REP 1 389d-390d Q 2 A 6 RE 2-3 395b-396a A 10 REP 3 399b-400b Q 5 A 3 412a-d Q 10 A 5 ANS 429c-430c 430d-431b A 8 ANS and REP 1, 3-4 432b-433b A 9 ANS and REP 2 433b-434c Q 11 438-442b PART III SUPPL, Q 99 A 4 1083-1084a
21 DANTE *Divine Comedy* HELL, VIII [106]-[12] 12-15b PURGATORY XXXII 102b-104 esp [118-123] 103c-d PARADISE I [10-2 113d XII [112-142] 126c-d

23 HOBBES *Leviathan* P RT I 78a b PA T I 212d 215b 238b 240a PART IV 248c d 273 d
25 MONTAIGNE *Essays* 23b c 82a b 154a 155 208b c 242d 250 b
30 BACON *Advancement of Learning* 27a-c 101a b
32 MILTON *Areopagi ia* 386a b
33 PA CAL *Pr vi cial Letters* 1a 7a 117b 166b / *Pens es* 775 323b 324a 862 865 342b 343b 89 -896 347a b 903 348a
35 LOCKE *T lerat on* 1a 2a 6c d 21c 22d
38 MON ESQUI U *Spirit of Laws* BK XII 86d 87b 87d
38 R USSEAU *Social Contract* BK IV 438d 439c
39 SM TH *W lth of Nati ns* BK V 344a b
40 G BON *De l and Fall* 83a 182d 184b 198d 200a 305a 313d esp 305a d 310b-312b 438b-443d esp 438b c 441a-443d 541 c 601d 605b
41 GI N *De l e and F ll* 134a 151c esp 134d 138a 143c 145d 198a 202a 328a 335a c esp 330b 334a 421b d-423c
43 FE ERALIST NUM ER I 30a
44 B SWELL *J hnso* 221d 224a p ssim
46 HEG L *Ph l sophy of Right* PART III par 27 88 89a / *Ph l s phy f Hi tory* ART 245d 246c PART I 313b-d PART IV 331d 332c 340d 355a b
47 GOETHE *Faust* PART I [4897 4910] 121b-122a
52 D STOE KY *Brothers Karamazo* BK V 128b-135a

6c(2) Sects nd schisms ar s ng from d r gence of belief and pr ct ce

6 HER DOTUS *Histo y* BK II 52 d
18 AUGU T NE *Confess o s* BK I par 10 18 15b 18b BK V 27 34 passim K VI par 25 51a c / *Chris n Doctrine* K III C I 33 670b c
20 AQUIN S *Summa Theolog* PART II I Q I A 10 AN and RE I 389d 390d Q A 8 R 432b-433b Q II A I R 3 438 439 Q 39 574a 577d
21 DANT *D ne Com dy* H LL XXVII 41b 43a
23 HOB ES *Levi tha* PART III 229d
27 SH K P ARE *Henry VIII* ACT V S I I [8 3] 581a b
32 M LTON *A opagitica* 404b-405a 406 b 409b 410a
33 PAS L *P o nci l Letters* 7a 13a / *Pen es* 86 342b
35 LO K *T lerat n* 22c d / *Hum U der sta d g* BK CH XXXI SECT 18 251 BK IV H XIX ECT II 386d 387c
36 SWIFT *Gull er* PART 22 b P RT IV 149b 150b
36 STERNE *T st m Sh dy* 332a 334b
39 SMITH *Wealth of Natio s* K V 344a b 345b 346c
40 GIBBON *Decl e and Fall* 80d 81a 181c 184b 214a 305a 328c esp 309c 313d 382b d 391 392c 438d 441d 541a-c 601d 608 c
41 GIBBON *D l e d Fall* 134a 161a c esp 151d 161a c 195a 202a 207a 208c 306a 307a 328a 335a c 421b d-424a 462c 464a 510b d 522b 529 534a 544b 545c 583c 586a
42 KANT *Science of Right* 444a-c
44 BOSWELL *Johnson* 114b 189b c 359a 536c 537a
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Chapter 80 REVOLUTION

INTRODUCTION

MOST of the words commonly used as synonyms for revolution such as insurrection uprising rebellion or civil war carry the connotation of violence and the use of armed force Most of the great revolutions in western history which come readily to mind—those in the city states and empires of the ancient world the Peasants Revolt in Germany in the 15th century the rebellion led by Cromwell in 17th century England the American and French Revolutions in the 18th century the Russian and the Spanish Revolutions in our own time—have been affairs of bloodshed Yet neither in political theory nor in historic fact does revolution always involve the use of force or the resort to violence

Thucydides describes both violent and non violent revolutions in the alternations of democracy and oligarchy in the constitution of the Greek city states In England the Great Rebellion which by civil war succeeds in beheading one Stuart king is followed by the Bloodless Revolution of 1688 which without any war at all *unseats* another Some of the revolutions in the European states in the middle *years of the* 19th century are accompanied by barricades and *fighting Some* however like the revolutions accomplished by the Reform Bills in England or by constitutional amendments in the United States are fundamental changes in government effected by due *process* of law by peaceful shifts in the distribution of political power

A *revolution* may involve action in defiance of the law *and* yet be prosecuted without violence on the part of the revolutionists as in the case of the *rebellion* which Gandhi led against British rule in India by the method of civil disobedience The use of armed force may not however be the only technique of revolutionary violence *Revolutions are effected* in two ways according to Aristotle by force and by fraud Though fraud does no physical violence it does violence to the will of those who are deceived In some cases when fraud is used the citizens are deceived into acquiescing in a change of government and afterwards, Aristotle observes they are held in subjection against their will In other cases they may subsequently be persuaded and their allegiance and good will won But as Machiavelli's later consideration of these two techniques of seizing power indicates the choice between force and fraud is one of expediency rather than of principle He recommends guile as an alternative to force with force held in reserve should cunning fail Both methods however employ the strategy of warfare

As opposed to both force and fraud and even to the method of civil disobedience which acts outside the law or in violation of it the writers of *The Federalist* conceive the possibility of a revolutionary process which is at once peaceful and legal It is precisely because they think that the Constitution of the United States affords the opportunity for achieving political change by constitutional amendment *that they* defend the clause which guarantees to every State in this Union a republican form of government and promises to protect each of them upon application to the federal government against domestic violence To the objection that such a guaranty may involve an officious interference in the domestic concerns of the members Hamilton replies It could be no impediment to reforms of the State constitutions by a majority of the people in a legal and peaceable mode This right would remain undiminished The guaranty could only operate against changes to be effected by violence Towards the prevention of calamities of this kind too many checks cannot be provided

In another of the Federalist papers, Madison

considers the possibility of an insurrection pervading all the States and comprising a superiority of the entire force though not a constitutional right He thinks such a case beyond the compass of human remedies It is enough if the Constitution diminishes the risk of a calamity for which no possible constitution can provide a cure Nor does a conflagration through a whole nation or through a very large proportion of it proceeding either from weighty causes of discontent given by the government or from the contagion of some violent popular paroxysm seem to Hamilton to fall within any ordinary rules of calculation In his estimation no form of government can always either avoid or control such revolutions But he adds where the whole power of the government is in the hands of the people there is the less pretence for the use of violent remedies in partial or occasional distempers of the State

WHEN ARISTOTLE THINKS of revolutions as taking place without violence he does not have in mind the strictly modern device of constitutional amendment Political change he suggests may be the result of accidents rather than of planned actions Political revolutions he writes sometimes spring from a disproportionate increase in any part of the state And this disproportion may sometimes happen by accident as at Terentum from a defeat in which many of the notables were slain in a battle with the Iapygians just after the Persian War the constitutional government in consequence becoming a democracy Or when the rich grow numerous or properties increase the form of government changes into an oligarchy or a government of familes

On the other hand to writers like Hobbes and Locke revolution means war and is inseparable from violence Those who deny the authority of the Commonwealth —apart from which according to Hobbes men live in a state of war—by renouncing their subjection to the Sovereign relapse into the condition of war commonly called Rebellion For *rebellion* is but war renewed Unlike bees and ants the peace of whose societies is never threatened by rebellion there are amongst men very many that think themselves wiser and abler to govern the public better than the rest and these strive to reform and innovate one this way another that way and thereby bring it into distraction and civil war

Locke s principle seems to be that whoever uses force without right—as everyone does in society who does it without law—puts himself into a state of war with those against whom he so uses it Having entered into society and introduced laws for the preservation of property peace and unity amongst themselves men who set up force again in opposition to the laws do *rebellare*—that is bring back again the state of war—and are properly rebels

Aquinas also seems to align revolution (which he calls sedition) with war and strife though he thinks it differs from them in two respects First because war and strife denote actual aggression on either side whereas sedition may be said to denote either actual aggression or the preparation for such aggression Secondly they differ in that war is properly speaking carried on against external foes being as it were between one people and another whereas strife is between one individual and another while sedition in its proper sense is between the mutually dissentient parts of one people as when one part of the state rises in tumult against another part

THOUGH THE WORD revolution may be used in both senses it nevertheless seems to be the case that traditional discussions of the causes and prevention of revolution theories of revolutionary strategy and tactics and the great issue of the right of rebellion all seem to contemplate the resort to or at least the threat of force to gain an end This also seems to be implied in the popular conception of the difference between revolution and evolution

The contrast between revolution and evolution may explain why the note of violence disorder or disruption colors the idea of revolution The wo d evolution usually signifies change which is gradual and which tends in one direction rather than another that d rection being for the most part toward a progressive development of changes already accomplist d Revolution is abrupt Revolution n occu n either d ection against the tide as ll as th it As act on and react on can be eq l and opposite in phys cal mot on so in social change

revolution and counter revolution can aim in opposite directions In either case whether revolution reverses the direction of change or precipitates a radical transformation toward which things are moving too slowly revolution seems to involve *overthrowing* the established order rather than *developing* its latent tendencies

It is in this sense that the revolutionist is a radical He may also be a reactionary in the sense that the radical change he is willing to use force to achieve is a return to some earlier condition rather than one which in the judgment of his opponents is in the line of progress or evolution But whether reactionary or progressive the revolutionist is never conservative If the established order does not submit readily to the radical change which a revolutionary person or party seeks or if it resists it must be forced to yield The revolutionist can be reluctant to use force but he can never forswear it entirely

This seems to be the sense in which Marx and Engels conceive the program of the *Communist Manifesto* as a revolutionary program Their conception of a revolutionary class or party is not however limited to the proletariat in their struggle against the bourgeoisie They apply it to the bourgeoisie not in the contemporary world when the established order of capitalism makes the bourgeoisie conservative or reactionary but in the 18th century when the bourgeoisie overthrew the landed aristocracy

The bourgeoisie they write historically has played a most revolutionary part The French revolution for example abolished feudal property in favor of bourgeois property And again When Christian ideas succumbed in the 18th century to the rationalist ideas feudal society fought its death battle with the then revolutionary bourgeoisie That the French Revolution represents the struggle not between the propertied and the propertyless classes but between two propertied classes—the bourgeoisie and the aristocrats—seems evident to Marx in the fact that during the very first storms of the revolution the French Bourgeoisie dared *to take away from the workers the right of association just acquired*

No less than the *Communist Manifesto* the American Declaration of Independence is a revolutionary document Its signers are prepared to use force to overthrow the established order which in their view has worked grievous iniquities and injustices upon the colonies But in the Marxist view the rebellion of the colonists unlike the French Revolution is political rather than economic even if it has economic as well as political motivations This distinction between economic and political revolution seems to be peculiarly modern

It is not that the ancients—Thucydides, Plato and Aristotle for example—fail to recognize the class war which is paramount for Marx They observe (as is indicated in the chapter on Oligarchy) the struggle between the rich and the poor for control of the state They know that the opponents in the frequent and violent revolutions which disturbed the Greek city-states are the oligarchs and the democrats —the men of great property and the men of little or none

The revolt of the Helots in Sparta is the exceptional case of a rebellion of slaves against their masters For the most part the struggle is between free men belonging to different economic classes The oligarchical and democratic revolutions which these classes in society foment are political in the sense of seeking to change the constitution rather than the economic system itself even though the constitutional changes may have economic as well as political effects In the opinion of some Aristotle reports the regulation of property is the chief point of all that being the question upon which all revolutions turn

Aristotle is willing to admit that "the equalization of property may prevent the citizens from quarrelling but he does not think that economic injustice is the only cause of revolution or economic justice its absolute cure. The avarice of mankind he writes, is insatiable at one time two obols was pay enough but now when this sum has become customary men always want more and more without end for it is of the nature of desire not to be satisfied and most men live only for the gratification of it The beginning of reform in his opinion is not so much to equalize property as to train the nobler sorts of natures not to desire more and to prevent the lower from getting more that is to say they must be kept

lown but not ill treated Such a reform would hardly cure the evil of chattel slavery That requires a revolution which effects the equalization of political status not the equalization of property

If a rebellion of slaves in the ancient world had succeeded in abolishing the institution of slavery it would have been in the modern view an economic as well as a political revolution for it would have radically altered the mode of production It is in this sense that what Adam Smith describes as the change from an agrarian to a manufacturing economy is strictly an economic revolution though it is Marx not Smith who gives currency to the word revolution as used in this sense It is exemplified in our common understanding of the phrase the industrial revolution which refers to the radical change in an economy based on manufactures when mass production by machines in factories replaces the system of production by workers using their own tools in their own homes

In manufacture writes Marx the revolution in the mode of production begins with labor power in modern industry it begins with the instruments of labor Our first inquiry then i how the instruments of labor are converted from tools into machines or hat is the difference between a machine and the implements of a handicraft? But for Marx the meaning of economic revolution is not limited to radical changes in the physical conditions of production Such changes necessarily involve equally radical changes in the social relationships of economic classes and in their possession of political power In the *Manifesto* the modern bourgeoisie is said to be itself the product of a long course of development of a series of revolut ons in the modes of product on and exchange The bourgeoisie in turn cannot exist without constantly revolutionizing the instruments of production and thereby the relations of production and with them the whole relations of society

According to Marx and Engels each step in the development of the bourgeoisie was accompanied by a corresponding political advance of that class An oppressed class under the sway of the feudal nobility an armed and self governing association in th mediaeval commune afterwards in the period of manufacture proper serving either the semi feudal or the absolute monarchy as a counterpoise against the nobility the bourgeoisie has at last since the establishment of Modern Industry and of the world market conquered for itself in the modern representative State exclusive political sway

ON THE QUESTION whether economic revolutions in their social and political aspects require violence the writers of the *Manifesto* seem to be unambiguous—at least so far as the communist program is concerned Since the Communist revolution is the most radical rupture with traditional property relations and involves the most radical rupture with traditional ideas it can hardly be expected to occur without open warfare no less violent than the earlier struggle of the bourgeoisie against the aristocrats Standing face to face with the bourgeoisie today the proletariat alone is a really revolutionary class in whose development Marx and Engels see the transition from a more or less veiled civil war raging within existing society up to the point where that war breaks out into open revolution and where the violent overthrow of the bourgeoisie lays the foundation for the sway of the proletariat

It is precisely on the use of force that the *Manifesto* distinguishes between communism and socialism especially the utopian variety of the latter The Socialists reject all political and especially all revolutionary action they wish to attain their ends by peaceful means and endeavor by small experiments necessarily doomed to failure and by the force of example to pave the way for the new social Gospel They therefore endeavor and that consistently to deaden the class struggle and to reconcile the class antagonisms Communist strategy on the contrary everywhere supports every revolutionary movement against the existing social and political order of things The Communists disdain to conceal their views and a ms They openly declare that the r ends can be attained only by the forcible overth ow of all existing social co id tions

Though fundamentally economi the communist revolut on cannot h lp hav ng political effects Pol t cal power accord ng to Marx

and Engels is merely the organized power of one class for oppressing another This applies to the proletariat s conquest of power Yet they also seem to think that the dictatorship of the proletariat is only a temporary phase in the communist revolution If the prol tariat dur ing its contest with the bourgeoisie is compelled by the force of circumstances to organize itself as a class if by means of a revolution it makes itself the ruling class and as such sweeps away by force the old conditions of production then it will along with these conditions have swept a vay the conditions for the existence of class antagoni ms and of classes generally and will thereby have abolished its own supremacy as a class In aiming at the economically classless society with the consequent transformation of the state the communist program seems to con ceive its revolution as abolishing the possibility of or need for any further revolutions peaceful or violent economic or political

IN ADDITION TO the issues raised by the eco nomic theory and history which underlie revo lutionary communism there is the debatable question whether an economically classless soci ety means the withering away of the state or at least such changes in political institutions that revolution would cease to be possible or necessary Even a hypothetical consideration of this question seems to call for attention to the various ways in which political revolutions take place With the advent of the classless society no opportunity would remain at least in theory for the type of revolution in which one ruling class replaces another But in such a society it is still conceivable that the equivalent of a pal ace revolution might substitute one ruling indi vidual for another—by the old fa hioned methods of assas ination or usurpation

For Aristotle however all revolutions which produce a change from one form of government to another also involve the replacement of one ruling class by another He distinguishes be tween such revolutions as affect the constitu tion when men seek to change from an existing form into some other for example from de- mocracy into oligarchy or from oligarchy into democracy and those revolutions which do not affect the constitution when men with out d sturbing the form of government wheth er oligarchy or monarchy or any other try to get the administration into their own hands. To these two types of revolution Aristotle adds a third which may be directed a ainst only portion of the constitution *e g* the establish ment or overthrow of a particular office as a Sparta it is said that Lysander attempted to overthrow the monarchy and king Pausanias the ephoralty

Conceivably any of these political cha ges might be accomplished without v o'e In modern constitutional states the basic prin ciple of constitutions can be chan ed from oli garchy to democracy by amendments or [ ] reforms which extend the franchise The stru ture of the government as to its offices or th r organization can be chan ed by some form of peaceful plebiscite As the Federalists point out the polls provide a natural cure for an ill ad ministration in a popular or representative con stitution namely a change of men But such changes of government in the ancient city states even when constitutional appea to Ar istotle to be revolutionary in the double sense of involving violence or the threat of it and of being radical transformations of the polity What is true of constitutional changes in ancient republics is also true of monarchies and ty ran nies both ancient and modern

When absolute power is concentrated in the hands of one man his subjects are nec ssarily without juridical means for redressin their grievances by changing the occupant of the throne much less for abolishin the monarchy entirely in favor of self government M hiavel li s advice to the prince on safeguardin his po ver against usurping rivals or rebellious sub jects seems to be written against the ba k ground of force and fraud as the normal methods of changing rulers or modes of r le They ar the very same methods which the prince in power must employ to maintain his po tion

There are two ways of contesting Machia velli writes the one by la v the other by force the first method is proper to m n th second to beasts but because the first is fre quently not sufficient it is necessary to ha recourse to the second Therefore it is necessary for a prince to understand how to ava l himself of the beast and the man Bein compel knowingly to adopt the beast [a prince] ou

to choose the fox and the lion because the lion cannot defend himself against snares and the fox cannot defend himself against wolves It follows according to Machiavelli that the prince seldom can be though he should always try to *appear* to be merciful faithful humane religious upright A prince especially a new one cannot observe all those things for which men are esteemed being often forced in order to maintain the state to act contrary to fidelity friendship humanity and religion

The stories of oriental despotism told by Herodotus the account of the Caesars given by Tacitus and Gibbon the chronicle of the English monarchy in the historical plays of Shakespeare all seem to indicate that crowns seldom change heads without bloodshed Machiavelli s rules for the prince do not greatly enlarge upon Aristotle s description of the arts by which the tyrant preserves his power Even when Aristotle proposes as an alternative method that the tyrant can try to be benevolent he adds the Machiavellian suggestion that the tyrant should at least appear to act like a good king

The tyrant Aristotle writes should lop off those who are too high He must put to death men of spirit He must be on his guard against anything which is likely to inspire either courage or confidence among his subjects He must prohibit literary assemblies or other meetings for discussion and he must take every means to prevent people from knowing one another After enumerating many similar practices which he calls Persian and barbaric arts Aristotle concludes that there is no wickedness too great for the tyrant if he is to maintain himself in power

These matters are more fully discussed in the chapter on TYRANNY In our present consideration of the types of revolution we must note one other political change which usually involves the widespread turbulence of civil war That is the rebellion of subject peoples against their imperial masters Unlike civil uprisings which seek to overthrow governments or effect a change in the ruling classes or persons these wars of rebellion seek to liberate one people from another or to establish the independence of colonies at the expense of empire

Still another type of insurrection aims at the dissolution of the state itself What Rousseau deals with in theory as the degeneration of the state into anarchy by the repudiation of the social contract calls to mind no historic examples but the few historic instances of wars of secession certainly illustrate the point They aim to dissolve a federal state by severing ties of union which have something like a contractual character

The distinction between these types of civil war may be clear in theory yet difficult to apply to historic cases Which sort of insurrection—a rebellion of colonies or a secession of states—does the Declaration of Independence announce? A theory current among American political writers in 1775 suggests that the thirteen colonies claimed the status of self governing dominions in a confederacy united under the British crown On this theory does the principle stated in the Declaration—that it is sometimes necessary for one people to dissolve the political bands which have connected them with another and to assume among the powers of the earth the separate and equal station to which the laws of nature and of nature s God entitle them —cover the secession of the Southern states from the American union as well as the revolt of the American states from Great Britain or the British Commonwealth of nations? Questions of fact are involved of course in any comparison of the Revolutionary War of 1776 and the war between the states in 1861 but the question of principle turns on the whole issue of whether revolution is a matter of might or right

THE RIGHT OF REVOLUTION does not seem to be a central consideration in ancient political theory The ancient discussion of revolutions appears to be more concerned with their causes their methods and their prevention This does not mean that the ancients treat revolutions entirely as contests for power On the contrary Aristotle declares that the universal and chief cause of the revolutionary impulse is the desire of equality when men think that they are equal to others who have more than themselves or again the desire of inequality and superiority when conceiving themselves to be superior they think that they have not more but the same or less than their inferiors—pretensions which may or may not be just

Nevertheless Aristotle s elaborate treatise on revolution in the fifth book of his *Politics* deals alike with revolutions that spring from real and from fancied injustices The object of his inquiry seems to be what modes of destruction apply to particular states and out of what and into what they mostly change also what are the modes of preservation in states generally or in a particular state and by what means each state may be best pre erved —*not* how revolution can be justified or why rebellion is the crime of treason or the folly of anarchy Such questions seem to come to the foreground in modern political theory though they also have a certain prominence in mediaeval teaching

Aquinas for example holds that sedition is a special kind of sin because it is opposed to a special kind of good namely the unity and peace of a people He qualifies this however in the case of an uprising against tyranny even if it involves civil strife Since in his view a tyrannical government is not just because it is directed not to the common good but to the private good of the ruler there is no sedition in disturbing a government of this kind unless indeed the tyrant s rule be disturbed so inordinately that his subjects suffer greater harm from the consequent disturbance than from the tyrant s government Indeed Aquinas writes it is the tyrant rather who is guilty of sedition since he encourages discord and sedition among his subjects that he may lord over them more securely

Holding that the end of government is the good of mankind Locke asks in a similar vein which is better that the people should be always exposed to the boundless will of tyranny or that the rulers should be sometimes liable to be opposed when they grow exorbitant in the use of their power and employ it for the destruction and not the preservation of the property of their people ? Since force is to be opposed to nothing but unjust and unlawful force Locke argues that a king may be resisted when he exceeds his authority or prerogative and uses his power unlawfully Since such a king has dethroned himself and put himself in a state of war with his people what shall hinder them from prosecuting him who is no king as they would any other man who has put himself into a state of war with them?

The right to resist a tyrant or a kin turned despot may lead to regicide but this seems no different to Locke from the punishment of any other criminal He who may resist must be allowed to strike and furth mor Locke continues he has a right when he prevails to punish the offender both for the breach of the peace and all the evils that followed upon it Rousseau is even less hesitant to condone tyrannicide The contract of government is so completely dissolved by despotism writes Rousseau that the despot is master only so long as he remains the strongest as soon as he can be expelled he has no right to complain of violence The popular insurrection that ends in the death or deposition of a Sultan is as lawful an act as those by which he disposed the day before of the life and fortunes of his subjects As he was maintained by force alone it is force alone that overthrows him

Those who say that it may occasion civil wars or intestine broils to tell the people they are absolved from obedience when illegal attempts are made upon their liberties or properties may as well say upon the same ground in Locke s opinion that honest men may not oppose robbers and pirates because this may occasion disorder or bloodshed Nor does Locke think that the right to resist injustice means that governments will be overthrown upon every little mismanagement in public affairs Great mistakes in the ruling part, he writes many wrong and inconvenient laws, and all the slips of human frailty will be borne by the people without mutiny or murmur But if a long train of abuses prevarications and artifices all tending the same way make the design visible to the people it is not to be wondered that they should then rouse themselves and endeavor to put the rule into such hands which may secure to them the ends for which government was at first erected

Hence to those who say that his revolutionary principle lays a perpetual foundation for disorder Locke replies that it will never operate until the inconvenience is so great that the majority feel it and are weary of it and find it necessary to have it amended Rebellions will occur only when the majority feel that the laws and with them their estates liberties and lives are in danger and perhaps their religion

too and so will exercise their natural right to resist with force if necessary the illegal force used a ainst them But strictly it is not the people who rebel rather it is they who put down the sedition of the tyrant

What Locke states as a right of resistance the Declaration of Independence seems to put more positively as a right of rebellion apparently de ducing it from other natural rights—of life liberty and the pursuit of happiness It is to secure these rights that governments are in stituted among men so that whenever any form of government becomes destructive of these ends it is the right of the people to alter or to abolish it and to institute a new govern ment The Declaration admits that govern ments long established should not be changed for light and transient causes but when a people suffer a long train of abuses and usur pations it is their right it is their duty to throw off such government and to provide new guards for their security

AGAINST SUCH REVOLUTIONARY sentiments or principles Hobbes Kant and Hegel seem to take a stand though in each case they place some qualification on their denial of a right of resistance or rebell on Hobbes for example denies the right of men to change their form of government or of subjects to resist their Sover ei n *except for the sake of self preservation* When men covenant to form a commonwealth they are bound Hobbes says to uphold the actions and judgments of the Sovereign they have cre ated they cannot lawfully make a new cove nant amongst themselves to be obedient to any other without his permission They that are subjects to a monarch cannot without his leave cast off monarchy and return to the confus on of a di united multitude

Furthermore because every subject is by this institution author of all the act ons and judgments of the Sovereign instituted it fol lows accord ng to Hobbes that whatsoever he doeth it can be no injury to any of his sub jects nor ought he to be by any of them ac cused of injust ce Yet e ery subject has liberty in all those things the right whereof cannot by covenant be transferred such as the right of a man to defend his own body to re sist those that assault him or to have access to food air medicine or any other thing with out which he cannot live

Kant disallows rebellion as a matter of right unless resistance is required to fulfill a moral duty outside the sphere of public right Obey the authority which has power over you (in everything which is not opposed to morality) is a Categorical Imperative Hence though a juridical constitution may be vitiated by great defects and coarse errors it is nevertheless abso lutely unallowable and punishable to resist it

Since in his view public right is founded on the institution of a *sovereign* will uniting all particular wills by one law Kant argues that to allow a right of resistance to this sover eignty and to limit its power is a contradic tion It should be remembered also that for Kant the only legitimate form of government is a republic resting on the foundation of popu lar sovereignty Kant is not considering resis tance to tyrannical or despotic power which lacks all juridical authority

A similar qualification appears in Hegel s dis tinction between the rebellion of a conquered people and revolution in a well organized state Only the latter action is a crime for only the latter situation corresponds to the Idea of the state—fully realized for Hegel only in a con stitutional monarchy never in a despotism or tyranny A rebellion in a province conquered by war he says is a different thing from a rising in a well-organized state It is not against their prince that the conquered are in rebellion and they are committing no crime against the state because their connex on with their master is not a connexion within the Idea or one within the inner necessity of the constitution In such a case there is only a contract, no political tie

With such qualifications on their position those who disfavor revolution or deny its basis in right may not be completely opposed to those who apparently think rebellions can be justified There may be qualifications on the other side too Aquinas for example justifies sedition not against any government or ruler but o ly against tyranny The signers of the Declaration of Independence speak of a right to alter or abolish any form of government but the writers of the Federalist papers do not em equally willing to acknowledge a right to over throw the Constitut on of the United States.

OUTLINE OF TOPICS

1 The nature of revolution

- 1a The issue concerning violent and peaceful means for accomplishing social, political or economic change
- 1b The definition of treason or sedition the revolutionist as a treasonable conspirator
- 1c Revolution and counter revolution civil strife distinguished from war between states

2 The nature of political revolutions

- 2a Change in the form of government or constitution
- 2b Change in the persons holding power deposition assassination usurpation
- 2c Change in the extent of the state or empire dissolution secession liberation federation

3 The process of political revolution

- 3a The aim of political revolution the seizure of power the attainment of liberty justice equality
- 3b Ways of retaining power and combatting revolution
- 3c The causes and effects of revolution under different forms of government
  - (1) Revolution in monarchies
  - (2) Revolutions in republics aristocracies oligarchies and democracies
  - (3) Rebellion against tyranny and despotism

4 The nature of economic revolutions

- 4a Change in the condition of the oppressed or exploited the emancipation of slaves serfs proletariat
- 4b Change in the economic order modification or overthrow of a system of production and distribution

5 The strategy of economic revolution

- 5a Revolution as an expression of the class struggle rich and poor nobles and commons owners and workers
- 5b The organization of a revolutionary class the bourgeoisie and the proletariat as revolutionary classes in relation to different economic systems
- 5c The classless society as the goal of economic revolution the transformation of the state

6 The justice of revolution

- 6a The right of rebellion the circumstances justifying civil disobedience or violent insurrection
- 6b The right to abrogate the social contract or to secede from a federation

7 Empire and revolution the justification of colonial rebellion and the defense of imperialism

REFERENCES

To find the passages cited use the numbers in heavy type, which are the volume and page numbers of the passages referred to For example in 4 HOMER *Il ad* BK II [265 283] 12d the number 4 is the numbe of the volume in the set the number 12d indicates that the passage is in section d of page 12

PAGE S CTIONS When the text is printed in one c lumn the letters a and b refer to the upper and lower halves of the page. For example in 53 JA IES *Psycholoy* 116a 119b the passa e b ins n the upper half of pa e 116 and ends in the lower half of pa e 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the page the lett rs c and d to the upper and lower halves of the right hand side of the page For example in 7 PLATO *Symposium* 163b 164c the passage begins in the lower half f the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One or mo e of the main di is on of a work (such as PART BK C CT) are som times included in the reference line numbe s in brackets are given in certain ca es *e g* *Il ad* BK II [265 283] 12d

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SYM BOLS The abbreviation esp call the reader s attention to on or more especially relev nt part of a whole refer n e passim s g ifies that the top c is discussed intermittently ath r than continuously in the work o pa sage cited

Fo dd tional inf mation conc ng the style of the refe nces see the Explanation of Refe ence Style f r general guidance in the use of *The G t Ideas* c nsult the Preface

The natu e of revolut on

The i su conce ning v olent and pe ceful me ns fo accompli hing social politi cal or economic ch nge

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21 Dante *Di e Comedy* hell xxxiv [28-69] 51c 52a
23 Hobbes *Leviathan* part i 77c part i 121d 122b 146 b 147 153c
26 Shakespe re *2nd Henry VI* act i sc i i [170-227] 39b 40a act ii sc iii [86-108] 45c d a t iii sc i [i 281] 47 50a ct iv sc ii [129-200] 59a d / *Richard II* act i sc iii [140-17] 334b c ct iv sc i [113 149] 342c 343a / *I t Henry IV* act v sc ii [i 25] 462b c c v 466a d / *2nd Henry IV* ac i sc i [87 209] 470a b / *Henry V* act ii ro-logue [19-31] 537c sc ii [79-181] 540 541a / *J lius C esar* 568a 596a c esp act i sc iii [101 130] 573c d a t ii sc i [10-34] 574c d [162 183] 576b act iii sc i [164 176] 582b
35 Locke *Toler tion* 14d / *Civil Government* ch xix sect 226-229 77a 78a
36 Swift *Gulliver* part i 33a 38a part iii 114b 115b
38 Monte quieu *Spirit of Laws* bk xii 88a 90c
38 Rouss au *Social Contract* bk ii 398d
40 Gi on *De l e and Fall* 251d 474c 475a 525d 526b
41 Gib on *De l ne a d Fall* 93 473b d 587b 588a
42 K t *Science of Right* 439a-441d 450d 451a
43 Con titutio of th U S articl ii sect 3 15d 16a m ndments xiv sect 2 4 18d 19a
43 Feder list n mbe 43 140c d number 69 208c d nu ber 4 222b-d
43 Mill *Liberty* 274b d [fn]
46 Hegel *Ph l s hy of Right* additions 172 146c-d
47 Goethe *Fa st* part ii [4812 4830] 119b 120a [10 242 254] 249b 250b
51 Tolstoy *War and P ace* bk viii 338c d bk xi 483b-484a 505 511b epilogue i 668a 669d

1c Revolution and counter revolution civil strife distinguished from war between states

6 Herodotus *History* bk iii 102d 107c bk v 172c 174b bk vi i 260b c
6 Thucydides *Peloponnesian War* bk i 355a b bk iii 434c-438c bk iv 459a c 463a-465c bk v 482d-483a bk viii 575c 576c 577b d 579c 583c 585d 586b 587a 589a 590a c
7 Pl to *Laws* bk i 641c 643a / *Seventh Letter* 806d 807b
9 Aristotle *Politics* bk v ch 4 [1304 18 39] 505d 506a / *Athenian Constitution* ch 14 19 558d 561d ch 29-41 566b 572a
14 Plutarch *Pompey* 533a c / *Caesar* 598b d / *Otho* 875b d
15 Tacitus *Hi tories* bk iii 261d 262a
18 Augustine *City of God* bk xix ch 7 515a-c
20 Aquinas *Si mma Theologica* p rt ii ii q 42 a i ans 583c 584b
23 Machiavelli *Prince* ch xix 26b d ch xx 31b c
23 Hobbes *Leviathan* part i 85d 86a p rt ii 99d 100a 114b c 147c
24 Rabelais *Gargantua and Pantagruel* bk i 54a c
25 Montaigne *Essays* 331a 470a b 504 506a
26 S akespeare *Ist Henry VI* act ii sc iv act iii sc i 11b 16b act iv sc i [182 194] 21d / *2nd Henry VI* 33a 68d esp act i sc i [180-259] 35c 36b / *3rd Henry VI* 69a 104d esp act i sc i 69a 72d / *Ri hard III* 105 148a esp a t v sc v [16-41] 148a c / *Ist Henry IV* act i sc i 434b d-435c / *Julius Caesa* act i i sc i [253 275] 583b
35 Lock *Ci l Government* ch xiii sect 155 60d 61a ch xix sect 224 243 76d 81d esp sect 224 230 76d 78c
40 Gibbon *Decl ne and Fall* 48d-49a 113b 437d
41 Gibbon *Decline a d Fall* 474a 594b 595b
43 D claration of Independence 1a 3b esp [80-94] 2b 3a
43 Constitution of t e U S article iv sect 4 16b c
43 Federalist num ber 16 66c 68d numbe 28 96c 98b nu ber 29 99b 101a numb r 43 141a 142d nu ber 46 152a 153
46 Hegel *Phil sophy of Hi tory* p rt iii 297a d
50 Ma x Engels *Communist Man festo* 424d 428a b

2 The n t re of polit cal revolutions

2a Change n the form of go ernment or con-st tution

Old Testament *I Samuel* 8—(D) *I K g* 8
6 H rodotus *H story* bk i 14 c bk iii 107c 108d bk v 167a b 171c 172c 177d 180a bk vi 193b c

6 THUCYDIDES *Pel ponnesian War* BK II 391c d K VIII 575c 576 577b d 579c 583c 585d 586b 587a 589a 590 -c

7 PLATO *Rep iblic* BK VII 401c d K VIII 403 -404a 405c-406a 408b 409b 411d-414b / *Seventh Letter* 800b

9 ARISTOTLE *P l t cs* BK II CH 12 [1273^{b}36–1274^{a}2] 470c-d BK III CH 3 [1276 35 ^{b}16] 473b-c K IV CH 5 [1292^{b}11 22] 492 BK V H 1 [130 ^{b}4 26] 502d 503a CH 3 [1303 14 24] 504c-d CH 4 [1304^{b}8 18] 506b CH 12 [1316 1 ^{b}27] 518d 519d / *Athenian Const tu tio* C 1 1 41 553a 572a passim esp CH 5 554d 555a CH 14 19 558d 561d CH 29 566b d CH 33 34 568b 569 CH 38 570a

14 PLUTAR H *Lycu gus* 32d 35d / *Solon* 68d 71d / *Timoleon* 195a 213d esp 205d 207a / *Lysa der* 354b d 368a c esp 359c 361a / *Pompey* 499a 538a c / *Ca sar* 577a 604d / *C to th Younger* 620a 648a c / *Cleomenes* 657a 663c / *Dion* 781b d 802a c

15 T CITU *A als* BK I 1a 2a 3a b 6a b

23 MACHIAV LLI *Prince* CH XXVI 36b-37d

23 HOBBES *Let tha* PART II 150b 151a 154b c

25 MONT IGNE *Essays* 47a 51a 462c-465c 504c 506a

35 LOCKE *Civil G vernment* CH XIII SECT 149 59b-d S CT 155 60d-61a CH XIX 73d 81d pass m

38 MONTE QUIEU *Spirit f Laws* BK VIII 51a 53d BK X 76c 78a

38 R U SEAU *S cial Contract* BK II 418a 420a 424a d

40 GI B N *Decl e and Fall* 24b d 28b 50b 51d 153c 156a 622d 623c

41 G B ON *Decli e d Fall* 73b 74d 202a d 217 219a 561 565a 574b 582c esp 575a 577d

42 K NT *Science of Right* 438d 441d 450d 452a

43 DECLARATION OF IN EPEND N [1 23] 1a b

43 CO STITUTION O THE U.S ARTICLE IV SE T 4 16b-c

43 FE ERALI T NUM ER 14 62a d NUM BER 21 78d 79b NU BER 43 141a 142d 143b 144a NUM ER 49–50 159b 162

43 MI L *L berty* 267d 268b / *Repr sent t e G vernment* 327b d 332d 350 353b

46 HEG L *Philos phy f Right* PART I I par 58 81 b ADDIT NS 166 145b / *Ph losophy of H st y* INTRO 203b 206a c PART III 294c 295a 300 301 P RT IV 355d 357a 364a c

50 MA X ENGEL *Commun st Ma festo* 424c d

51 TOLST Y *W and P ce* BK VI 238c 243d 260a 262a E OGU I 668a 669d

2*b* Change n the persons holding power depo t on assa n t on usurp t on

OLD TES AM ENT *J dges* 9 / *II S muel* 15 18—(*D*) *II Ki gs* 5 8 / *I K g* 1 1 5 16 8 0 —(*D*) *III Kings* 12 1 25 16 8 20 / *II Kings* 8 7 15 9 1 10 11 11 1 16 12 19–21 14 17–21 15 8 10 13 14 23 26 30 21 18–26—(*D*) *IV Kings* 8 7 15 9 1 10 11 11 1 16 12 19–21 14 17 1 15 8 10 13 14 23 26 30 21 18 26 / *II Ch o icles* 10 23—(*D*) *II Pa alipomenon* 10 23

5 AESCHYLUS *Prometheus Bound* [199–243] 42b c

5 ARI TOPHANES *Eccl sia sae* 615a 628d esp [1–570] 615a 621b

6 HERODOTUS *History* BK I 2 3d 12b 13b BK II 84a 86a BK I I 120b c BK V 164d 165a 171c 172c 177d 180a 182a

6 THUCYDIDES *Pelopon esian War* BK VI 523c 524d

7 PLATO *Seventh Letter* 813d 814c

9 ARI TOTLE *Politics* K II CH 10 [1272^{b}2 10] 468d-469 K V CH I [1301^{b}4 13] 502d CH 10 [1311^{a}28 312 39] 513c 514d BK VII CH 14 [1333^{b}28 38] 538c d

14 PLUTARCH *P pl cola* 77a 81c / *Caius Ma ius* 344c 354a c / *Sulla* 369a 374a 382a 387a c / *Crass s* 440a 445d / *Sert rius* 469a 470d / *Pompey* 499a 538a c / *Caesar* 577a 604d / *Cato the You ger* 620a 648a c / *Tiberius G acchus* 678b d / *Cicero* 708a 713b / *Anto y* 749 755c / *Marcus B utus* 802b d 824a c esp 803d 811a / *Galba* 859a 869d / *Otho* 869b d 876d

15 TACITUS *Annals* BK XI 102d 103a BK XII 112a 113b K XV 169a 176b / *Hist ies* BK 189a 266a

18 AUGU INE *City of God* BK III CH 15–16 176d 178d

23 MA HIAVELLI *Princ* CH VII 12d 14 CH X 15d 16a

23 HOB *Leviathan* PART I 78b PART 152b c 159 -c

26 SHAKESPEAR *1st Henry VI* ACT II SC V [33–129] 13b 14a / *2nd Henry VI* ACT I SC I [51–259] 35b 36b ACT SC II 43 -44c A T III SC 47a 51a / *3rd Henry VI* 69a 104d / *Ri hard III* 105a 148 / *Richard II* 320a 351d / *I t Henry IV* 434a 466d / *2 d Henry IV* 467a 502d esp ACT IV C I 487b 489d / *Jul us Cae ar* 568a 596a E P ACT II SC [0–19] 574c 576 A T III S 580b 583

27 SHAK S ARE *Ma b th* 284a 310d esp ACT IV SC I 303b 306b / *Tempest* A T I C II [6–148] 525b 526d ACT II SC I [270–296] 534 d A T V SC I [1–79] 545c

35 LOCKE *Ci l Government* CH XVII 70c 71a H XIX 73d 81d p ssim

36 SWIFT *Gull er* PART II 80b

38 ROU EAU *Inequ lity* 361c 362a / *S cial C n tract* BK II 419a 424a d K IV 432 433 438a b

40 GI ON *D cl e d F ll* 33d-49a passim esp 39c d 41d-42 c 44b 56 61a esp 56b c 60c 61 63b 64a 69a 79a passim esp

(2 *The nature of pol t cal revolutions 2b Change in the persons holding power deposit on assass nation usurpat on*)

69a b 70a c 76a 78c 111b 113a 114b d 115b 128a c 159b d 178d passim 386a 387d 436a 438a 489d 491a 515b 518a
41 GIBBON *Decli e and Fall* 113c 117b 161a 194d passim esp 166a 167d 189a 194d 428 472b-476b
42 KANT *Science of Right* 440a 441b
43 FEDERALIST NUMBER 16 68a c NUM ER 20 77b c NUMBER 21 78d 79b NUMBER 26 93c 94d NUMBER 28 96c 98b NUM ER 29 99b 101a NUMBER 33 108b 109a NUMBER 38 124b 125a NUM R 44 146c d NUMBER 46 152a 153a NUMBER 48 157b c
43 MILL *Liberty* 268d 274b d [fn 1]
44 BOSWELL *Johnson* 195c d
46 HEG L *Phil sophy of History* PART III 294c 295 300c 301c PART IV 359a
51 TOLSTOY *Wa and Peace* BK I 8d 9a

2c Change in the extent of the state or empire d ssolution secess on l berat on feder ation

OLD T STA ENT *Judges* 3 14 4.24 6 10 1–11 33 13 1–5 24 25 14 16 / *II Chronicles* 10–11—(D) *II Paral p meno* 10–11 / *Jere m h* 41—(D) *Jeremi s* 41
A OCRY HA *I M ccabees* 1–9 p m—(D) OT *I Machabees* 1–9 passim / *II Maccab es* 6–13 pass m—(D) OT *II Machabees* 6–13 passim
6 HE ODOTUS *History* K III 121c 123c BK V 160 185a c passim BK VI 186 191c
6 TI UCYDID S *Pelopo nesian Wa* 349a 593 c
14 PLUTARCH *Theseus* 9a d / *Romulus* 20c 28a / *Ag silaus* 480b d-499 c
15 T CITUS *Annals* BK I 17c d 18c 20b BK III 54d 56b BK IV 76a 77c 82d 83b BK XII 116d 117d K XIV 149a 151b / *H stor es* BK IV 269b 277d e p 269d 270b 283b-292b BK V 297 302a
23 MACHIAVELLI *Pri ce* C I XXVI 36b 37d
23 HOB S *Le atha* P RT II 152d 153
35 LOCKE *Civil Government* CH III SECT 113 118 51b 52c I XIX SECT 211 73d 74a
38 MONT QUI U *Spirit of Laws* BK VIII 57b c BK IX 59b
38 ROU E U *Social Contract* BK II 403a 404a
40 GI ON *Decl e and F l* 144d 14(521a b
41 GI ON *D li e d Fall* 218- 19a 439d 451c pass m 465a-466a 577b-c
43 D LARATION OF I D P NDENCE 1a 3b
43 ARTICLES OF CO F DE ATION 5a 9d esp XI 9a
43 CO STITUTION OF TI E U S ARTICLE IV S CT 3 16b AME DME TS XI S CT 2 4 18d 19a
43 FEDERALIST NUMBER 15 16 62d 68d NUMBER 58 181d 182a
43 MILL *Representative Government* 428b-430a

3 The process of political revolution

3a The aims of political re olution the seizure of power the attainment of liberty justice equality

5 ARISTOPHANES *Lysistrata* [476–597] 588d 591a / *Ecclesia usae* [173 240] 617a c
6 HERODOTUS *H story* BK I 29d 30c BK V 175b
7 PLATO *Seventh Letter* 800d 813d 814c
9 ARISTOTLE *Pol tics* BK II CH 7 461d-463c esp [1266 31–b14] 461d-462b CH 10 [1272 28 b16] 468c 469a BK V CH I 4 502a 506b CH 12 [1316 1 b27] 518d 519d / *Athenian Con st tutio* CH 2 553a c CH 5 554d 555a
14 PLUTARCH *Timoleon* 195a 213d esp 205d 207a / *Pelopidas* 233d 237b / *Agis* 648b d 656d / *Cleomenes* 657a 663c / *Tiberius Gracchus* 671b d 681a c esp 678b d / *Caius Gracchus* 681b d 689a c / *D on* 781b d 802a c / *Marcus Brutus* 802b d 824a c esp 811b-d 813d
15 TACITUS *Annals* BK I 4a d 6b 7a 10d 11b BK IV 76a 82d 83a BK VI 89c BK XI 104a-c BK XII 112a b 117c d BK XIV 149a b BK XV 169b 174b d / *Histories* BK I 191a b 195a c 198d 199c 203b-c BK II 215d 216b 224d 225a 233d 235c BK IV 269c 270b 290a c
23 MACHIAVELLI *Prince* CH XXVI 36b-37d
23 HOBBES *Leviathan* PART II 114b 115a
26 SHAKES EARE *Julius Caesar* 568a 596 c esp ACT I SC III [101 130] 573c d ACT II SC I [0–34] 574c d [162 183] 576b ACT III SC I [164 176] 582b
35 LOCKE *Toleration* 18c 21c / *Ci l Govern ment* CH XIV SECT 166–168 63d 64c CH XVIII XIX 71a 81d passim
36 SWIFT *Gulliver* PART II 80b
38 MONT SQUIEU *Spi it of Laws* BK V 29a BK VIII 54b-c
38 RO SSEAU *Inequal ty* 361a 362a / S cial *Co t act* BK II 402c d BK III 418a-419
40 GIBBON *Decline and Fall* 29c d 35a 44b-47a esp 44c 45a 45d-46a 48d 49a 73b c
41 G BBON *Decl ne a d Fall* 216d 217b 574b-575d
43 DECLARATION OF IND PENDENCE 1a 3b
43 FE ERALIST NUMBER 45 147d 148b
43 M LL *Liberty* 267d 268b
46 HEG L *Philos phy of History* PART III 299c 301c PART IV 364 c
47 GO THE *F ust* P RT II [10,242 284] 249b-250b
51 TOLSTOY *War a d Peace* BK I 9d 10b EPILOGU I 666c 669d E ILOGUE II 680b-684a

Ways of retaining power and combatting revolution

3c The causes and effects of revol t on under d fferent forms of go ernment

3 (1) Revolut on in monarch es

(3c *The causes and eff cts of revolut on under d fferent forms of government 3c(1) Revolution in monarch es*)

9 ARISTOTLE *Pol t cs* BK V CH 10 [1310 39]-CH 11 [1313 33] 512d 516a
14 PLUT RCH *Lycurgus* 35c d 47a 48a / *Ages laus* 482a 485b / *Demetrius* 732a c
15 TACITUS *H stories* BK I 190a 191a 192d 193 193c 194a 195c 198c 201a b 208b c 209d 210b 210d 212d BK IV 266b c
18 AUGUSTINE *City of God* BK III CH 15 176d 178a
23 MACHIAVELLI *Pri ce* CH IV 7a 8a CH VI 9b d CH VIII IX 14a 16a CH XV XX 22b 31c
23 HO ES *Levi than* PART II 108d 109a 148d 149b 150c 151a 153a 156c 159a c PART IV 273a c
26 SHAKESPEARE *1st Henry VI* 1a 32a c esp ACT II SC IV 11b 12d ACT IV SC I [30-113] 20a 21a / *2 d Henry VI* 33a 68d esp ACT I SC I 33b d 36b / *3 d Henry VI* 69a 104d esp ACT I SC I 69a 72d / *Richa d III* 105a 148a c esp ACT V SC V [15 41] 148a c / *Richard II* ACT IV SC I [107 149] 342c 343a / *1st Henry IV* ACT IV SC I I 459b-460b ACT V SC I [30-120] 461b 462a / *2nd Henry IV* ACT IV SC I 487b 4 9d
35 LO KE *Ci l Government* CH XIV SECT 166-168 63d 64 CH XVIII XIX 71a 81d pass m
36 SWIFT *Gulliver* PART III 102b 103a
38 MONTESQUIEU *Spi it of Laws* BK V 25d 26c BK VII 45c-46a BK III 53a 54a 56d 57a BK XI 77b-78a BK XXV 212a b
38 ROUS EAU *S cial C ntract* BK III 419b c
40 GIB ON *Decl ne and Fall* 68b d 69a
43 FEDERALIST NU BER 48 157b-c
43 M LL *Liberty* 267d 268b
44 BOSW LL *J h so* 120a c
51 TOLSTOY *Wa and Pe ce* BK VI 238c 243d 60 262a EPILOGUE I 668 669d

3c(2) Re ol t ons in republics aristocracies oligarchies and democracies

6 H RODOTUS *H to y* BK VI 202d 203b
6 THUCYDIDE *Pel pon sian Wa* BK III 434c 438c esp 436d-438b BK IV 459a-c 463a-465c 466 -469b BK V 482d-483a 502d 504b esp 503d 504b BK VI 519c 520d 533 c BK VIII 574d 590c esp 575c 576c 577b d 579c 583c 585d 586b 587a 589a 590a c
7 PLATO *Republic* BK VIII 402a-413d / *Laws* BK IX 744c d / *Seventh Letter* 806d 807b
9 ARISTOTL *Pol cs* BK II CH 9 [1270b7 34] 466d-467a CH 11 [12 3b17 24] 470b CH 12 [1273b36-1274a22] 470c d BK III C I 13 [1284 3 b34] 482a-483a CH 15 [1286b12 16] 485a BK IV CH 5 [1292b11 22] 492a BK V CH I [13 2 8 16] 503b c 3 [1302b21 1303 24] 504 d [13 3b5 18] 505 CH 4 [1304 18 29] 505d 506a CH 5-9 506b 512d CH 12 [1316a 19-b27] 519a d BK VI CH 5-6 523b-524c / *Athenian Constitution* CH I 41 553a 572a passim esp CH 5 554d 555a CH 29 566b d CH 33 34 568b 569a CH 38 570a-c
14 PLUTARCH *Theseus* 13a 14c / *Lycurgus* 35c d 47a 48a / *Lycurgus Numa* 61b d 64a c / *Solon* 68d 70d 75c 76d / *Themistocles* 96b c / *Camillus* 117c 121a c / *Coriolanus* 176b 184c / *Lysander* 361a 368a c / *Crassus* 444d 445d / *Pompey* 521c d 525a b 533a c / *Caesar* 581d 582a 588c 589a 590d 591a / *Cato the Younger* 631b c 636c d / *Ag s* 648b d 656d / *Cleomenes* 657a 663c / *T ber ius Gracchus* 671b d 681a c esp 680b d / *Caius Gracchus* 681b d 689a c / *Cicero* 708a b / *Antony* 750a b
15 TACITUS *Annals* BK I 1a 2a 3a b BK VI 97b-c / *Histo ies* BK II 224d 225a
23 HOBBES *Leviathan* PART II 105c 106b 149a b 152c
38 MONTESQUIEU *Spi it of Laws* BK II 6c 7b BK III 10c 11a BK V 21d 22b 23 25a BK VII 44d 45b BK VIII 51a 53a BK X 64a b BK XII 91c 92b BK XV 114c 115b
38 ROUSS AU *Social Contract* BK III 411b-c 418c-419b
39 SMITH *Wealth of Nat ons* BK V 308b-c 420b c
43 FED RALIST NUMBER I 30b NUMBER 9-10 47a 53a NUMBER 15 16 62d 68d NUMBER 17 20 70a 78b NUM R 21 78d 79b NUMBE 25 90a 91d NUMBER 27 95b c NUMBER 29 99b 101a NUMBER 38 124b-125a NUMBER 43 141a 142d NUMBER 46 152a 153a NUMBER 48 157b c NUMBER 58 181b-182a NUM ER 60 184b d NUMBER 63 194b 195b
43 MILL *Representat e Government* 329b-330c 350c 351d 366a 367b
46 HEG L *Philosophy of History* PART II 276d 277a 278d 279b PART III 300 301c P RT IV 355d 357a 364a-c
50 MARX ENGELS *Commun st Manifesto* 423d 424b 429c 430b 432b d

3c(3) Rebell on against tyranny and despotism

OLD TESTAMENT *I K ngs* 12 I 25—(D) *III K gs* 12 I 25 / *II Ch onicles* 10—(D) *II P al pomenon* 10
APOCRYP A *I Maccabees* I I 2 44—(D) OT *I Ma habees* I I 2 44 / *II Maccabees* 6 I II 8 I 4—(D) OT *II Machabees* 6 I II 8 I 4
6 H RODOTUS *History* BK I 21b 24a b BK IV 148a BK V 170c 172c 178a 180a BK VI 187b-c
6 THUCYDIDES *Pel ponnesian War* BK VI 523c 524c
7 PLATO *Republ c* BK VIII IX 411d-420d
9 ARISTOTLE *Pol tics* BK V CH 4 [1304 30-35] 506a C I 10 [1310a39]-CH 12 [1315b39] 512d 518d H 12 [1316a25 35] 519b / *Athen an Co t tut o* CH 14 19 558d 561d

The nature of economic revolutions

a Change n the condit on of the oppre sed o exploited the emancip t on of slaves serfs prolet riat

4b Change in the economic order modification or overthrow of a system of production and distribution

5 The str t gy of economic revolution

(5 *The strategy of economic revolution.*)

5*a* Revolution as an expression of the class struggle rich and poor nobles and commons owners and workers

6 HERODOTUS *History* BK VI 202c 203b BK VII 243b c
6 THUCYDIDES *Peloponnesian War* BK III 423a b 434c 438c BK IV 463a-465c BK V 482d 483a 503d 504b BK VI 524d 525d BK VIII 564a 593a c passim esp 568d 569a 575c 576c 579c 583c 587a 590c
7 PLATO *Republic* BK IV 343d
9 ARISTOTLE *P l t cs* BK II CH 6 [1265b6-12] 461a CH 7 461d 463c c 1 9 [1269 37 b7] 465c BK V CH 3 [1303b5-8] 505a CH 4 [1304 18 b6] 505d 506a CH 7 [1306b22 1307a2] 508c d CH 9 [1310 19-25] 512c CH 10 [1310b9-15] 512d 513a CH 12 [1316 39-b22] 519c d / *Athen an Constitut on* CH 2 553a c CH 5 554d 555a
14 PLUTARCH *S lon* 68d 70c / *Pericles* 124a 130b c p 126d 127a / *Coriola us* 176b 184c / *Ag s* 648b d 656d / *Cleomenes* 657a 663c / *Tiberius G cchus* 671b d 681a c / *Caius Gra chus* 681b d 689 c / *Cicero* 708a 713b
15 TACITUS *H sto ies* BK II 224d 225a
26 SHAKESPEARE *nd Henry VI* ACT IV SC II 57d 59d
27 SHAKESPE RE *Coriolanus* ACT I SC I [1 47] 351a d
38 MONTESQUIEU *Spirit of Laws* BK XI 77b 79b
40 GIBBON *Decline a d Fall* 126d 127c 144a c
41 GI ON *Decl e and Fall* 574b 582b passim esp 575a d 578c 581a
46 H GEL *Philosophy of History* PART II 263b d 275b 276a PART III 295d 296c
50 MARX *Capital* 8d 9c 113c 131a 146c esp 131a 134d 137a 138b-c 141c 146b c 209c 210c 294b 295a
50 M RX ENGELS *C mmun st Man f to* 415a 434d
51 TOLSTOY *War and P a* BK X 410c-421c
54 FR UD *New Introductory Lectu es* 884a

5*b* The organi ation of a re olut on ry class the bo rgeo s e and the proletariat s re ol t onary class s in relat on to d f ferent economic systems

50 M RX *Capital* 9c 354a 378d esp 356c 358a 371d 372b 378c 378d 379b [fn 2]
50 M RX ENGELS *Commu st Man festo* 416c d 419b d-425b esp 419d-420c 421d-422a 422c 423b-424b 428d

5*c* The classless soc ety as the go l of economic re ol tion the transformat on of the st te

50 M RX *Cap tal* 9c
50 MARX ENGEL *Comm ist Ma fe to* 416c-d 424d-425b 429b-c

6 The justice of re olution

6*a* The right of rebellion the circumstances justifying civil disobedience or violent insurrection

4 HOMER *Il ad* BK IX [50-64] 57c d
5 SOPHOCLES *Ant gone* 131a 142d esp [441 470] 134d 135a
5 ARISTO HANES *Lys st ata* 583a 599a c esp [476-597] 588d 591a
6 HERODOTUS *History* BK III 103d 107c
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Other discussions relevant to the process of political change by violent or pe ceful means *see* CONSTITUTION 7-7a 8-8b GOVERNMENT 6 LAW 7d LIBERTY 6b-6c MONARCHY 5a-5b PROGRESS 4a SLAVERY 6c-6d STATE 3g TYRANNY 1c 6-8

The cause and prevention of revolution under different forms of gov rnment *see* ARISTOCRACY 3 CONSTITUTION 7 7b DEMOCRACY 7a OLIGARCHY 3a-3b TYRANNY 8

For Other discussions relevant to economic change and to the strategy of economic revolution *see* HISTORY 4a(2) LABOR 7c(3) LIBERTY 6b OPPOSITION 5b PROGRESS 3b SLAVERY 3c STATE 5d(2)-5e WAR AND PEACE 2c WEALTH 9h

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ADDITIONAL READINGS

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I Works by authors represented in this collection

II Works by authors not represented in this collection

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Chapter 81 RHETORIC

INTRODUCTION

RHETORIC is traditionally regarded as one of the liberal arts When the liberal arts are counted as seven and divided into the three and the four—the *trivium* and the *quadrivium*—rhetoric is grouped with grammar and logic not with the mathematical arts of arithmetic and geometry astronomy and music The implication of this grouping seems to be that rhetoric like grammar has something to do with language or discourse and that like logic it is concerned with thought with reasoning or argument But if grammar is the art of writing or speaking correctly and if logic is the art of thinking correctly it may be wondered what rhetoric can add to these other arts either on the side of language or of thought

Logic by itself does not suffice to ensure that words are properly used to express thought nor does grammar guarantee that discourse which is flawless in syntax also complies with the demands of rationality Hence neither grammar nor logic seems to challenge the function of the other as together they challenge the function of rhetoric

Upon the way this challenge is met depends not only the definition of rhetoric but also the value put upon it In the tradition of the great books rhetoric is both praised as a useful discipline which liberally educated men should possess and condemned as a dishonest craft to which decent men would not stoop Like the words sophistical and dialectical the epithet rhetorical carries traditionally as well as currently a derogatory implication The three words sometimes even tend to merge in meaning in expressing the same reproach against trickery Yet of the three sophistical alone implies an unqualified rebuke

We do not speak of good and bad sophistry But dialectic has its defenders as well as its detractors and even those who like Plato charge rhetoric with being an art of enchantment or a form of flattery also distinguish between a true and a false rhetoric the one associated with dialectic as a wholly admirable pursuit the other classed with sophistry as a vocation divorced from virtue According to Bacon the aim of rhetoric is to support reason not to oppress it Rhetoric may be misused but logic also has its abuses Rhetoric can be no more charged in Bacon s opinion with the coloring of the worse part than logic with sophistry or morality with vice

THE PURPOSE AND scope of rhetoric are capable of broad and narrow definitions The broader view which we shall consider subsequently tends to merge rhetoric with poetics as together the art of eloquence in any sort of discourse The narrower view tends to restrict rhetoric to the art of persuasion in the sphere of practical affairs Rhetorical skill consists in getting others to embrace certain beliefs to form the opinions or make the judgments which the speaker or writer wishes them to adopt Usually action not persuasion is the ultimate goal The rules of rhetoric are supposed to give one power not merely to move the minds of men to certain conclusions but through persuasion of their minds to move men to act or not act in a certain way

The sphere of rhetoric so conceived is limited to moral and political problems The things about which men deliberate before acting the things on which they pass moral judgments or make political decisions constitute the subject matter of oratory or what Hobbes calls exhortation and dehortation that is counsel accompanied with signs in him that giveth it of vehement desire to have it followed

In the narrower conception rhetoric seems to be confined to *oratory* It is with oratory and

orators that Socrates seems to be concerned when he discusses rhetoric with Phaedrus or with Gorgias Gorgias who was a teacher of rhetoric praises the power of the orator to persuade the judges in the courts or the senators in the council or the citizens in the assembly or at any other public meeting In view of this Socrates asks him whether he will accept the definition of rhetoric as the artificer of persuasion When Gorgias admits that persuasion is the chief end of rhetoric Socrates goes on to ask whether rhetoric is the only art which brings persuasion or do other arts have the same effect? Does he who teaches anything persuade men of that which he teaches or not? If so then arithmetic as well as rhetoric is an artificer of persuasion

Gorgias reminds Socrates of his initial point about the orator that rhetoric is the art of persuasion in courts of law and other assemblies about the just and unjust But Socrates is still not satisfied that rhetoric has been sharply defined He introduces the distinction between knowledge and belief or opinion and gets Gorgias to agree that whereas there cannot be false knowledge as well as true beliefs and opinions may be either true or false Persuasion can therefore be of two sorts— one which is the source of belief without knowledge as the other is of knowledge

Gorgias is willing to limit rhetoric to that form of persuasion which only gives belief to which Socrates adds the emphatic negative that the rhetorician does not instruct the courts of law or other assemblies about things just and unjust but creates beliefs about them If an assembly wishes to learn about matters connected with medicine or shipbuilding it consults the physician or shipwright not the orator But says Gorgias when a decision has to be given in such matters, the rhetoricians are the advisers they are the men who win their point He confirms this by reminding Socrates that the speeches of Themistocles and Pericles not the suggestions of the builders determined the Athenian assembly in the construction of the harbor the docks and walls

By way of further illustration Gorgias tells of occasions when he has succeeded in getting patients to do what they would not do on the advice of their physicians I have persuaded the patient he says to do for me what he would not do for the physician just by the use of rhetoric Similarly in a contest for public office between a rhetorician and a man of any other profession the rhetorician more than any other would have the power of getting himself chosen for he can speak more persuasively to the multitude than any of them and on any subject Such is the nature and power of the art of rhetoric!

In comparing it with dialectic Aristotle seems to have a different conception of the function of rhetoric Neither rhetoric nor dialectic he says is the scientific study of any one separate subject both are faculties for providing arguments Both also are concerned with arguments which fall short of scientific demonstration that is with matters of opinion concerning which something probable can be said on either side of the issue

Though for Aristotle rhetoric is the counterpart of dialectic in that both deal with arguments on any subject his differentiation between the two disciplines seems to indicate that rhetoric is limited to the consideration of oratory in the familiar sense of public speakin The rhetorician is concerned with persuading an audience not as the dialectician is with carrying on a dispute in which two individuals may be privately engaged The persuasion furthermore is directed to obtaining a certain response from that audience—not merely agreement but either action or a decision to act or approval which charged with emotional force or enthusiasm has practical significance

The divisions of rhetoric according to Aristotle are determined by the kinds of oratory as these in turn are determined by the types of audience to be addressed Of the three elements in speech making—speaker subject and person addressed Aristotle writes it is the last one the hearer that determines the speech's end and object The hearer must be either a judge with a decision to make about things past or future or an observer A member of the assembly decides about future events a juryman about past events while those who merely decide on the orator's skill are observers

From this it follows that there are three divisions of oratory (1) political (2) forensic and (3) the ceremonial oratory of display"—or

as these three are sometimes named delibera tive legal and epideictic Political speaking urges us either to do or not do something Forensic speaking either attacks or defends somebody The ceremonial oratory of dis play either praises or censures somebody These three kinds of rhetoric refer to three different kinds of time The political orator is concerned with the future he tries to persuade men about things to be done or not done hereafter The party in a case at law is concerned with the past one man accuses the other and the other defends himself with reference to things al ready done The ceremonial orator is properly speaking concerned with the present since all men praise or blame in view of the state of things existing at the time though they often find it useful also to recall the past and to make guesses about the future

Rhetoric has three distinct ends in view one for each of its three kinds The political orator aims at establishing the expediency or the harm fulness of a proposed course of action Parties in a lawsuit aim at establishing the justice or in justice of some action. Those who praise or attack a man aim at proving him worthy of honor or the reverse

THIS CONCEPTION OF rhetoric as concerned with oratory or public speaking gives one answer to the question of what rhetoric adds to grammar and logic as arts of discourse In ora tory more is involved than the communication of ideas the marshalling of arguments the making of proofs D scourse whether written or spoken has an effect upon the emotions as well as upon the mind and disposes a man to act as well as the mind to assent

The communicating of ideas by words Berkeley observes is not the chief and only end of langua͏ge as is commonly supposed There are other ends as the rais ng of some pas sion the excitin͏g to or deterring from an ac tion the putting the mind in some particular disposition—to which the former is in many cases barely subservient and sometimes entirely omitted I entreat the reader to reflect with himself and see if it doth not often happen either in hearing or reading a discourse that the passions of fear love hatred admiration dis dain and the like arise immediately in his mind upon the perception of certain words without any ideas coming between

Engaged in the oratorical task of persuading the people of New York to ratify the federal constitution the writers of the Federalist papers are aware that a torrent of angry and malig nant passions will be let loose in the debate of that issue They realize that arguing for the adoption of certain political principles or con clusions is not like teaching geometry the ob jects of which are entirely abstracted from those pursuits which stir up and put in motion the unruly passions of the human heart

Hamilton admits at once in the opening paper that the plan offered to our delibera tions affects too many particular interests in novates upon too many local institutions not to involve in its discussion a variety of objects foreign to its merits and of vie vs passions and prejudices little favorable to the discovery of truth Nevertheless he tries to persuade his audience to judge the issue on the merits of the argument alone

The opponents of the Constitution he says may be actuated by upright intentions The opposition may spring from sources blameless at least if not respectable—the honest errors of minds led astray by preconceived jealousies and fears So numerous indeed and so powerful are the causes which serve to give a false b as to the judgment that we upon many occasions see wise and good men on the wrong as well as on the right side of questions of the first ma͏gnitude to society

To recognize this Hamilton tells his audi ence is to be on guard against all attempts from whatever quarter to influence your deci sion by any impressions other than those which may result from the evidence of truth He wishes them to cons der him as relying upon nothing but the merits of his case I frankly acknowled e to you my convictions he writes and I will freely lay before you the reasons on which they are founded My motives must remain in the depository of my own breast My arguments will be open to all and may be judged by all They shall at least be offered in a spirit which ill not disgrace the c use of tr ith

We can detect here nothe lem nt n the art of rheto ic The orator em to be con cerned not only v ith the stre gth of his argu

ments and with the passions of the audience which he hopes to move by these arguments but also with the impression he makes upon that audience as a person of good character and honest intentions devoted to the truth and above all to the best interests of those whom he addresses

The great speeches reported—or perhaps polished if not invented—by Thucydides exemplify this effort on the part of the orator as do also the orations written by Shakespeare for his characters of which the speeches of Brutus and Antony in *Julius Caesar* are among the most notable as well as the most familiar The point is also illustrated by the *Communist Manifesto* which is denounced as propaganda by those who mistrust the writers but to those who trust them is powerful and persuasive oratory

Separating the use of witnesses and documents by the forensic orator from what he calls the strictly artistic means of persuasion—*i e* the means intrinsic to the art of rhetoric—Aristotle divides the latter into the three elements already noted Persuasion he says depends on the personal character of the speaker on putting the audience into a certain frame of mind [and] on the proof or apparent proof provided by the words of the speech itself Persuasion is achieved by the speaker s personal character when the speech is so spoken as to make us think him credible Secondly persuasion may come through the hearers when the speech stirs their emotions Thirdly persuasion is effected through the speech itself when we have proved a truth or an apparent truth by means of the persuasive arguments suitable to the case in question

These being the three technical means of effecting persuasion Aristotle concludes that rhetorical skill must cons st in the ability (1) to reason logically (2) to understand human character and goodness in their various forms and (3) to understand the emotions to know their causes and the way in which they are excited The art of rhetoric therefore involves more than training in grammar and logic. It requires the study of ethics and psychology—particularly knowledge of the types of human character and knowledge of the passions

The same consideration of the conditions of oratory seems to lead Socrates to tell Phaedrus that Thrasymachus or anyone else who teaches rhetori ought to give an exact description of the nature of the soul to explain the mode in which it acts or is acted upon The rhetorician he goes on having classified men and speeches, and their kinds and affections and adapted them one to another will be able to tell the reasons of his arrangement and show why one soul is persuaded by a particular form of argument and another not

This fact about rhetoric—that it must adapt speech to persons as well as to subject matters—seems to occasion Socrates definition of oratory as the art of enchanting the soul It is not he tells Phaedrus confined to courts and public assemblies Whether this art is a good or evil thing depends on whether it requires the speaker to know—more than the nature of the person he is addressing—the truth about the matters spoken of To engender probabilities in the minds of the many by the likeness of the truth it is necessary says Socrates to know the truth He who knew the truth would always know best how to discover the resemblances of the truth Such a man might be able not only to please and so to persuade his audience but also, perhaps he might be able to say what is acceptable to God

The issue about rhetoric then—at least so far as that issue concerns its being an art consistent with virtue—seems to turn on the admixture of pleasure and truth The question is whether given a particular sort of audience to persuade the orator does not have to choose between pleasing them and telling them the truth Does the art of rhetoric extend to the persuasion of bad men as well as good? Is the skill of the orator to be measured by his success in persuading without regard to the character of the audience he has persuaded and the means he has been forced to use? Does the goodness of the orator—and of his speech—depend upon his being morally virtuous as well as rhetorically skillful?

One view of rhetoric seems to identify persuasion with pleasure and to divorce it from truth Pascal for example in his essay *On Geometrical Demonstration* speaks of two methods the one of convincing the other of pleasing In order

to persuade he writes one must consider the person with whom one has to deal whose spirit and heart one must know the principles he accepts, the things he loves In view of such considerations Pascal holds that the art of persuasion consists more in pleasing than in convincing to such an extent is it true that men are controlled more by whim than by reason He does not doubt that there are rules which are as reliable with respect to pleasing as there are for demonstrating nor does he seem to condemn rhetoric for being such an art unless he writes with irony when he says that pleasing is incomparably more difficult more subtle more useful and more admirable

Rhetoric so conceived appears to Locke to be a powerful instrument of error and deceit and to Plato to be no art at all but a form of flattery As cookery tries to please the palate without caring what is good for the health of the body so rhetoric according to Plato aims to delight without caring what is good for the soul or the state Cookery and rhetoric are shams or simulations of the genuine arts of medicine and politics which aim at the good not at pleasure 'This is the sort of thing Socrates tells Callicles which I term flattery whether concerned with the body or the soul or whenever employed with a view to pleasure and without any consideration of good and evil

Socrates then asks Callicles whether he knows rhetoricians who aim at what is best and seek to improve the citizens by their speeches or whether all are bent upon giving them pleasure forgetting the public good in the thought of their own interest playing with the people as with children and trying to amuse them but never considering whether they are better or worse for this

When Callicles replies that he thinks there are some who have a real care for the public in what they say Socrates says that he is contented with the admission that rhetoric is of two sorts one which is mere flattery and disgraceful declamation the other which is noble and aims at the training and improvement of the souls of the citizens and strives to say what is best whether welcome or unwelcome to the audience But he asks Callicles have you ever known such a rhetoric or if you have and can point out any rhetorician of this stamp who is he?

SOCRATES MAY NOT be asking a rhetorical question He may be presenting the defenders of rhetoric with this critical dilemma *either* the orator adheres to the truth and aims at the good even if such highmindedness defeats his efforts at persuasion with an audience whom he thus displeases *or* the orator takes persuasion as his end and subordinates everything else to the rhetorical means for succeeding with any sort of audience

Bacon rises to the defense by rejecting the dilemma as ungenuine The duty and office of rhetoric he writes is to apply reason to the imagination for the better moving of the will He admits that rhetoric is controlled by other considerations than the truth Though logic handleth reason exact and in truth and though the proofs and demonstrations of logic are toward all men indifferent and the same the proofs and persuasions of rhetoric ought to differ according to the auditors

Nevertheless Bacon thinks it was great injustice in Plato though springing out of a just hatred for the rhetoricians of his time to regard rhetoric as a voluptuary art resembling it to cookery that did mar wholesome meats and help unwholesome by a variety of sauces to please the taste For we see that speech is much more conversant in adorning that which is good than in coloring that which is evil for there is no man but speaketh more honestly than he can do or think and it was excellently noted by Thucydides in Cleon that because he used to hold on the bad side in causes of state therefore he was ever inveighing against eloquence and good speech knowing that no man can speak fair of courses sordid and base

Aristotle s defense of rhetoric seems to be implied in the remark that its function is not simply to succeed in persuading but rather to discover the means of coming as near such success as the circumstances of each case allow Just as for him the sophist differs from the dialectician not in the skills of argument or dispute but in moral purpose or respect for truth so the name rhetorician may be applied to two sorts of men Rhetoric may signify either the speaker s knowledge of his art or his moral

purpose For want of separate names both the honest and the sophistical orator are called and can claim to be rhetoricians and it is this which confuses the issue

IN THE TRADITION of the great books Aristotle s *Rhetoric* occupies a place comparable to that which as noted in the chapter on POETRY his *Poetics* unquestionably fills It seems to be not merely the first but the standard treatise on oratory It divides rhetoric into three parts—the first concerned with invention the second with the disposition or order of a speech the third with problems of expression To the last of these belongs the analysis of the orator s use of language and his style in speaking to the second the analysis of the structure of an oration into such parts as proem statement argument and epilogue and to the first under the head of invention belongs the consideration of the means of persuasion

As we have already noted the artistic means of persuasion are according to Aristotle threefold—emotions character and argument The orator must consider how to arouse and use the passions of his audience as well as calculate how far to go in displaying his own emotions He must consider the moral character of the audience to which he is appealing and in this connection he must try to exhibit his own moral character in a favorable light Finally he must know the various types and sources of rhetorical argument—not only what sorts of argument are available for a particular purpose but also how to employ each argument most persuasively In this last respect Aristotle distinguishes rhetorical proof from rhetorical induction—the use of what he calls the enthymeme as opposed to the use of examples—and he relates this distinction to the difference between dialectical proof and induction which he treats in the *Topics*

Cicero and Quintilian may extend Aristotle s analysis in certain directions but neither they nor modern writers like Campbell and Whately depart far from the framework Aristotle sets up for the discussion of oratory Even those who reject Aristotle s authority in logic natural philosophy and metaphysics pay him the tribute of following (as does Hobbes) his treatment of oratory or of approving (as does Bacon) his contribution to rhetoric In the case of this science as with few others Bacon finds no serious deficiencies in the accepted tradition He calls rhetoric a science excellent and excellently well labored and places the emulation of Aristotle first among the causes why later writers in their works of rhetorics exceed themselves

Yet by another standard Aristotle s *Rhetoric* may be judged deficient Because he confines his attention almost exclusively to oratory Aristotle s discussion leaves rhetoric in a larger sense almost untouched This limitation of rhetoric to the subject matter of oratory does not go unexplained Every other art Aristotle writes can instruct or persuade about its own particular subject matter for instance medicine about what is healthy and unhealthy geometry about the properties of magnitudes, arithmetic about numbers and the same is true of the other arts and sciences But rhetoric he says we look upon as the power of observing the means of persuasion on almost any subject presented to us

This last statement would seem to give rhetoric complete generality Aristotle qualifies it however People fail to notice he says that the more correctly they handle their particular subject the further they are getting away from pure rhetoric So far as knowing good arguments and knowing how to use them are concerned the physicist and the mathematician need no help from rhetoric The art of rhetoric is necessary only in dealing with such topics as do not fall within the subject matters or systems of the established arts and sciences. Such topics are precisely those with which the orator must deal The duty of rhetoric Aristotle writes in summary is to deal with such matters as we deliberate upon without arts or systems to guide us in the hearing of persons who cannot take in at a glance a complicated argument or follow a long chain of reasoning This is his answer to those who have given rhetoric a far wider subject matter than strictly belongs to it

But Aristotle s explanation of his limitation of rhetoric is itself limited to only one of its major parts namely the construction of arguments As contrasted with the mathematician, the physician and the philosopher whose mastery of the subject matter of their arts or sci

ences gives them a command of the relevant principles and methods of argument only the orator needs the special art of rhetoric to provide him with the topics from which examples and enthymemes can be drawn and to give him skill in the use of such arguments But it is not only the orator who must consider the character and emotions of his audience It is not only the orator who must consider the best way in which to order the parts of an elaborate discourse Above all it is not only the orator who is faced with the problem of using language more or less effectively in the expression of thought and especially in its communication to others All these considerations and problems are common to the orator and the teacher They are considerations and problems which must be faced not merely by the public speaker who tries to move an audience to action but by anyone—poet philosopher or scientist—who tries to write whatever he has to say as effectively as possible

Competence in a particular art or science may give a man competence with respect to arguments in the field of his particular subject matter but it does not seem to give him competence with respect to these other considerations and problems which he faces when he tries to communicate his knowledge or thought Here then is the possibility of a broader conception of the art of rhetoric—an art concerned not merely with being persuasive in the sphere of action but with eloquence or effectiveness in the expression of thought

We find this view of rhetoric reflected in Chaucer s *Canterbury Tales* In his Prologue the Franklin asks his compan ons to forgive his crude speech for he explains I never learned rhetoric to tell you the truth whatever I say must be blunt and plain I never slept on Mount Parnassus or stud ed Marcus Tullius Cicero And the Squire apologizes for the inadequacy of his English to describe the beauty of Canace It would take an excellent rhetorician he says who knew his colorful figures of speech to describe her adequately Though Aristotle s *Rhetoric* for the most part neglects this broader conception of rhetoric in order to expound the rules of oratory the third book of his treatise which deals with the use of language ind cates that problems of style are common to or tory and poetry and to other types of discourse as well

Kant seems to hold this broader conception of rhetoric when he says that the arts of speech are *rhetoric* and *poetry* In the tradition of western thought the two arts tend to become identified when each is separated from any particular subject matter As appears in the chapter on POETRY poetry like rhetoric has a broader and a narrower meaning In the narrower meaning it is the art of the narrative just as in its narrower meaning rhetoric is the art of oratory The other sense in which poetics as an art can be understood is according to Bacon with respect to words not matter In this sense he writes it is but a character of style and belongeth to arts of speech

In this sense the poetic art is hardly distinguishable from the rhetorical art The problems involved in composing a good speech are not the same as those involved in writing a good poem (or what Bacon calls a feigned history) But when poetics and rhetoric are each separated from such problems to become the arts of writing or speaking well about anything then in becoming as general as discourse itself they tend to become one and the same art—an art of style or expression an art of preaching or teaching the truth about any matter on which one mind seeks to communicate with another

IN THE TRADITION of the great books no book does for the art of rhetoric in general what Aristotle s *Rhetoric* does for that art in the limited sphere of oratory But Augustine s treatise *On Christian Doctrine* engages in a general rhetorical analysis that is in a way comparable to Aristotle s analysis of oratory In this work Augustine brings his own professional trainı ıg as an orator to bear on the problems of reading interpreting and expounding Sacred Scripture The fact that he is dealing with Sacred Scripture and hence in his view with the teaching of the most fundamental truths lifts him above the limited concerns of the orator but the fact that he limits himself to Sacred Scr pture also prevents him from formulating his rules of interpretation and expos t on vith the compl t gen r lity they would have to possess n o d r to be th rules of a general rt of rheto c

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tian Doctrine Augustine declares that having considered in the preceding books the mode of ascertaining the proper meaning of Scripture he will now treat the mode of making known the meaning when it is ascertained He disclaims any intention to lay down rules of rhetoric he wishes merely to engage it on the side of truth To this end he tries to show how Scripture itself and such holy men as St Cyprian and St Ambrose in commenting on Scripture have employed the art of rhetoric

It is the duty Augustine writes of the interpreter and teacher of Holy Scripture both to teach what is right and refute what is wrong and in the performance of this task to conciliate the hostile to rouse the careless and to tell the ignorant both what is occurring at present and what is probable in the future But once his hearers are friendly attentive and ready to learn whether he has found them so or has himself made them so the remaining objects are to be carried out in whatever way the case requires The first rule of a general rhetoric would thus seem to be one of creating a receptive frame of mind in the persons being addressed This accomplished the teacher must proceed with various alternatives in mind

If the hearers need teaching Augustine writes the matter treated of must be made fully known by means of narrative On the other hand to clear up points that are doubtful requires reasoning and the exhibition of proofs If however the hearers require to be roused rather than instructed in order that they may be diligent to do what they already know greater vigor of speech is needed Here entreaties and reproaches exhortations and upbraidings and all the other means of rousing the emotions are necessary

In Scripture and its great commentators Augustine finds wisdom not aiming at eloquence yet eloquence not shrinking from wisdom He also finds examples of the three kinds of style which Cicero had distinguished—the eloquence of those who can say little things in a subdued style moderate things in a temperate style and great things in a majestic style These three styles Augustine connects with the three ends which Cicero had assigned to eloquence—teaching giving pleasure and moving The subdued style he says should be used in order to give instruction the temperate style in order to give pleasure and the majestic style in order to sway the mind

The great books of history science and philosophy provide additional materials for general rhetorical analysis They offer us the light of examples at least even if they do not like Augustine s commentary on Scripture give us the guidance of rules Such historians as Herodotus Thucydides Tacitus and Gibbon exhibit a diversity of styles in the writing of history The diversity is not only on the grammatical level of the use of language but also on the logical level of order and argument Rhetorical principles control the way in which the language and the organization of the parts are suited to each other and to the historian s purpose—to the effect he wishes to produce upon his reader

The way in which Euclid writes the *Elements* is a style of exposition having rhetorical as well as logical features In its rhetorical (if not its strictly logical) form it is applicable to other subject matters This may be seen in Spinoza s adoption of it in his *Ethics* and in Newton s adaptation of it in his *Mathematical Principles of Natural Philosophy* The dialogue form which Plato seems to have invented for writing philosophy appears to recommend itself rhetorically not only to other philosophers but also to a scientist like Galileo in the composition of his *Two New Sciences* If the doctrines of the *Summa Theologica* or of the *Critique of Pure Reason* were separated from the very special styles of these two works they would probably not have the same effect upon the reader and as they are written they affect different readers differently as differently as do the styles of Dante Milton Melville Dostoevsky Adam Smith and Karl Marx

Some methods of exposition may be more appropriate than others to certain subject matters There is a great difference in the delivery of mathematics says Bacon and of politics. But in every subject matter or field of learning there is the common problem of how to make language serve most effectively to enlighten or convince in the communication of thought The problem arises in the writing of a single sentence as well as in the organization of a whole discourse

THE CHOICE OF WORDS and the formation of new words the invention and employment of figures of speech by which abbreviation or amplification of discourse may be achieved and the imagination freshened—these are some of the considerations of style which Aristotle discusses (both in his *Rhetoric* and in his *Poetics*) and which Augustine illustrates in his analysis of Scripture They suggest the rules of a general rhetoric founded on principles as universal as Pascal s insight that words differently arranged have a different meaning and meanings differently arranged have a different effect

This observation indicates a further answer to the question raised much earlier namely why the art of rhetoric is needed over and above the skills of grammar and logic For oratory the question has been answered by reference to those rules of rhetoric which deal with the passions and with moral character But for a more general rhetoric concerned with all discourse the answer must be in terms of rules of style of the sort Pascal s observation suggests

If there were never more than one grammatically and logically correct way of saying anything then grammatical and logical standards would suffice for the regulation of sound discourse But if there are always several ways of stating something and if each of them satisfies the rules of grammar and logic but differs in the impression it makes on the mind then criteria other than those of grammar and logic will be needed to determine our choice of which to use

Such criteria may take the passions and the imagination into account but they may also look primarily to the manner in which the mind itself naturally works The fact that there are several ways of presenting the same truth to the mind—and usually several ways in which the mind can interpret the same statement—defines the scope of a general rhetoric and the relation of its rules to those of grammar and logic

Nevertheless some of the great authors seem to doubt the worth of rhetoric in science or philosophy Locke for example admits that in discourses where we seek pleasure and delight rather than information and improvement such ornaments —as figurative speeches and allusion in language — can scarce pass for faults But he adds if we would speak of things as they are we must allow that all the art of rhetoric besides order and clearness all the artificial and figurative application of words eloquence hath invented are for nothing else but to insinuate wrong ideas move the passions and so indeed are perfect cheats and where truth and knowledge are concerned cannot but be thought a great fault either of the language or person that makes use of them

Descartes also declares that those who have the strongest power of reasoning and who most skilfully arrange their thoughts in order to render them clear and intelligible have the best power of persuasion even if they can but speak the language of Lower Britanny and have never learned rhetoric Yet he qualifies this severity somewhat by identifying dialectic with rhetoric and granting its possible use to serve to explain at times more easily to others the truths we have already ascertained

Plato for the most part tends in the opposite direction keeping dialectic and rhetoric poles apart But if there were a true as opposed to a false rhetoric a rhetoric concerned with knowledge and truth not merely opinion and pleasure he would be willing it seems to admit it to the company of dialectic and regard it as an aid in the teaching if not the discovery of the truth The pedagogical utility of rhetoric as well as dialectic appears in the summary which Socrates gives to Phaedrus after they have finished examining the speeches about love

Until a man knows the truth of the several particulars of which he is writing or speaking Socrates says and is able to define them as they are and having defined them again to divide them until they can no longer be divided and until in like manner he is able to discern the nature of the soul and discover the different modes of discourse which are adapted to different natures and to arrange and dispose them in such a way that the simple form of speech may be addressed to the simpler nature and the complex and the composite to the more complex nature—until he has accompl h d ll th s he will be unable to handle arguments according to rules of art e ther for the pu pose of teaching or pe u d ng

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the pa sages referred to For example in 4 HOME Iliad BK II [265 283] 12d the number 4 is the number of the volume in the set the number 12d ind cates that the passage is in section d of page 1

PAGE SECTIONS When the text is p inted in one column the letters a and b refer to the upper and lower hal es of the page For example in 53 JAM s Psychology 116a 119b the passage begins in the upper half of page 110 and ends in the lo ver half of page 119 When th text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the page the letters a d d to the upper and lo er halves of the right hand side of the p e For example in 7 PLATO Sympos um 163b 164c the passa e beg ns in the lo half of the left hand side of pa e 163 and ends in the upper half of the right hand s de of p e 164

AUTHOR S DIVISIONS One or more of the main di isions of a work (such as PART K CH SECT) are sometimes included in the reference line numbers in brackets are given in cer tain cases g Iliad BK II [265 283] 12d.

B BL RE ERENCES The references are to book chapter and verse When the King J mes and Douay vers ons diffe n title of books or in the numb ring of chapters or verses the King James ve sion is cited first and the Douay indicated by a (D) follow e g OLD T STA M NT Nehemiah 7 45—(D) II Esd as 7 46

SYM OLS Th abbreviation esp calls the reader s attention to one or more especially relevant p rts f a wh le reference pass m signifies that the topic is dis ussed intermit tently rather than c ntinu usly in the work or passage c ted

For dd ti al information concerni g the style of th eferences see the Explanat on of Ref e ce Styl for general guidance in the use of *The Great Ideas* consult the Preface

1 The nature and scope of rheto c

7 P ATO *Ph ed us* 115a 141a c esp 136a 141a c / *Meno* 176d 177a / *Gorgias* 252a 294d esp 260a 262 280d 283a
9 ARISTOTLE *Rh t ic* 593a 675a c esp BK I H I 3 593a 599 CH 4 [1359b1 18] 599d BK I I CH I [1404 I] 654a
10 GALEN *Natur l Facult* BK I CH 16 180d 181a
12 EP CTETUS *D scour es* BK I H 8 113d 114c K I CH 23 170a 172d
14 PLUTARCH *Peri l s* 129b 130a
17 PL TINUS *Fo th E n d* R IV CH 3 175a / *F fth E ead* TR IX CH II 250d
18 AUGU TINE *Ch s an Do trin* K II CH 36–37 653d 654b K IV H I 5 675b d 677d
19 AQUINAS *Summa Theol gica* PART II Q 27 A 2 R P 2 737d 738
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30 BACON *Adv cement f Le rn g* 56b 62c 69 esp 66b 67
33 PAS AL *Ge metr cal Dem str t on* 439b–446a
35 LOCK *Hum Under t d g* BK III CH X S T 34 299d 300a
42 KANT *Judgement* 532b d 535b-c

1a The d stinction of hetoric from d alect c and sophi try the rheto cian and the ph losopher

6 THUCYDIDES *Pelop nnes an W ar* BK 425c d
7 PLATO *Protagoras* 39d 42c 47d-48 50d 52d 57a d / *Euthydemus* 65a 84a c esp 83a b / *Ph drus* 131b 141a c / *Ap log* 200a 201b 203a 205 / *Gorg s* 252 294d esp 253b 256c 258b 259 265a 267c 280d 285a / *Thea tetus* 525d 526a 528 530b / *Soph st* 555d 556b 559 561a 579 d / *Ph lebus* 634b 635a
8 ARISTOTL *Topics* K I CH 3 144a b
9 ARISTOTLE *Rh t ic* K I CH I 2 593 598b CH 4 [1359b9–17] 599d
12 AUR U *Med t t ons* BK I SECT 7 253b d
14 PLUTAR H *Themis ocle* 88d
18 AU USTINE *Conf ions* BK II p r 7–8 14c 15 K V p r o 29b d / *Ch ist Do t* K II C I 36–37 653d 654b K V H 5 677a d CH 12 683d 684c H 7 28 696a 697a
19 AQUINAS *Summ The l g c* PA T I Q 83 A I AN 436d-438a
24 RA LA *Ga g tu a d Pa t gr l* K II 101b 106
25 MONT N *E y* 446d 450a 453 -455a
30 BA ON *Ad cement f Le rn ng* 66c 67c

(1 *The nature and scope of rhetoric* 1a *The distinction of rhetoric from dialectic and sophistry the rhetorician and the philosopher*)

31 DESCARTES *Rules* x 16d 17a
33 PASCAL *Geometrical Demonstration* 439b 446a
35 LOCKE *Human Understanding* BK III CH X SECT 34 299d 300a
43 MILL *Liberty* 292b 293b
47 GOETHE *Faust* PART I [1995 2000] 47a b

1b The relation of rhetoric to grammar logic and psychology

7 PLATO *Phaedrus* 131b 141a c / *Gorgias* 281c 282c
8 ARISTOTLE *Interpretation* CH I [16 5–8] 25a CH 4 [17^{a}1 7] 26b
9 ARISTOTLE *Rhetoric* BK I CH I 2 593a 598b CH 4 [1359^{b}9–17] 599d BK III CH I 12 653b d 667b
10 GALEN *Natural Faculties* BK I CH 16 180d 181a
18 AUGUSTINE *Christian Doctrine* BK II CH 36–37 653d 654b
23 HOBBES *Leviathan* PART I 55a b 67c 72a d
25 MONTAIGNE *Essays* 75a 77d 448d-449c
30 BACON *Advancement of Learning* 31a d 56b 67 passim esp 58c 59a
31 DESCARTES *Discourse* PART I 43b
33 PASCAL *Pensées* 14 16 174a b
35 LOCKE *Human Understanding* BK III CH X SECT 34 299d 300a
42 KANT *Judgement* 575b-c

1c The relation of rhetoric to the arts of government the orator and the statesman

4 HOMER *Iliad* BK II [278 393] 12d 13d
5 EURIPIDES *Suppliants* [399–425] 261d 262a / *Orestes* [852–956] 402d-403d
5 ARISTOPHANES *Peace* [601–656] 532d 533c
6 HERODOTUS *History* BK V 180c d
6 THUCYDIDES *Peloponnesian War* BK III 425c d 427a-c
7 PLATO *Phaedrus* 129d 130c / *Apology* 200a 212 c / *Gorgias* 252a 294d esp 254d 256d / *Statesman* 604c 605c / *Laws* BK IV 684 686b
9 ARISTOTLE *Ethics* BK X CH 9 [1180^{b}28 1181 18] 435d-436a / *Politics* BK IV CH 4 [1292 4 38] 491b d passim BK V CH 5 [1305 7 15] 506d / *Rhetoric* 593a 675a c esp BK I CH I [1354^{b}23 34] 593d 594a CH 3–8 598b-608c BK II CH I [1377^{b}14 1378 19] 622b d 623a
12 AURELIUS *Meditations* BK VIII SECT 30 287d
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14 PLUTARCH *Pericles* 129b 130b / *Alcibiades* 159 b / *Phocion* 604b d-605c / *Cato the Younger* 621c / *Demosthenes* 691b d 704a c / *Cicero* 704a 723d esp 709a / *Demosthenes Cicero* 724a 725d
15 TACITUS *Annals* BK I 10d 11b 12c 13d BK XIII 126a b / *Histories* BK IV 290a d
18 AUGUSTINE *Christian Doctrine* BK IV CH 5 677a d CH 18 19 686d 688a CH 24 694b-c
19 AQUINAS *Summa Theologica* PART I II Q 7 A 2 REP 3 652d 653c
23 MACHIAVELLI *Prince* CH XXIII 33d 34b
23 HOBBES *Leviathan* PART II 106a b 127d 128d 129b-c 158d 159a
25 MONTAIGNE *Essays* 147b 148a
26 SHAKESPEARE *Julius Caesar* ACT III SC II 583c 586c
27 SHAKESPEARE *Coriolanus* ACT III SC II [39 86] 374a c
30 BACON *Advancement of Learning* 1d 2b 25a c 78a d
32 MILTON *Areopagitica* 383a
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38 MONTESQUIEU *Spirit of Laws* BK XXIX 266b c
38 ROUSSEAU *Political Economy* 369d
40 GIBBON *Decline and Fall* 64a c 303c 384d 385b
43 FEDERALIST NUMBER I 29d 30c NUMBER 58 181b c
43 MILL *Representative Government* 361b 362c
44 BOSWELL *Johnson* 374a c
46 HEGEL *Philosophy of History* INTRO 153d 154a PART II 273d 274a

2 The function of rhetoric in expository speculative and poetic discourse

7 PLATO *Phaedrus* 129d 141a c
9 ARISTOTLE *Rhetoric* BK I CH 2 [1355^{b}26–35] 595b [1356^{b}36–1357^{a}7] 596c [1358 3 26] 597d 598b CH 4 [1359^{b}1 18] 599d BK III CH I 12 653b d 667b / *Poetics* CH 6 [1449^{b}20–1450^{b}13] 684a 685a esp [145 ^{b}4 13] 684d 685a CH 19 691d 692b
18 AUGUSTINE *Christian Doctrine* BK II CH 6 638a d CH 36–37 653d 654b BK IV 675 698a c
22 CHAUCER *Clerk's Prologue* 295a 296a
30 BACON *Advancement of Learning* 11b 12c esp 12b c 38c 39a 62c 69c esp 65b / *Novum Organum* BK I APH 65 114b c
33 PASCAL *Pensées* 22 23 175b 50–59 178b 179b
35 LOCKE *Human Understanding* BK III CH X SECT 34 299d 300a
42 KANT *Pure Reason* 3c-4a c / *Practical Reason* 294b c / *Pref Metaphysical Elements of Ethics* 376c d / *Judgement* 524a b 532b-d 575b-c
44 BOSWELL *Johnson* 130c 131a 180b

2a The devices of rhetoric figures of speech the extension and contraction of discourse

8 ARISTOTLE *Topics* BK VIII CH I [157^{a}1 18] 213a b
9 ARISTOTLE *Rhetoric* BK III CH I 12 653b d 667b / *Poetics* CH 21 [1457 1 1458^{a}7] 693a-d CH 2 694a 695

6 PLUTARCH *Lycurgus* 42c 43b / *Phocion* 606c-d / *Marcus Brutus* 803b-c
8 AUGUSTINE *City of God* BK XI CH 18 331d 332a / *Christian Doctrine* BK III CH 29 668a d CH 37 674b d BK IV CH 7 678c-682a
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23 HOBBES *Leviathan* PART I 67b PART II 127d CONCLUSION 282c d
24 RAB LAIS *G gantua a d Pantagruel* BK II 77b 78b 101b 106a BK III 195c
25 M NTAIGNE *Essays* 15c d 113d 114b 148a 149a 196b-197 198b-c 465c d
26 SH KE E R *1st Henry IV* ACT I SC III [209-21] 439d / *Henry V* ACT IV SC VII [35] 559a
27 SHAKESPEARE *Troilus and Cress da* ACT III SC II [180-189] 122 / *S nnets* LXXXII 598d
28 G LBERT *Loadstone* PREF 2b c
29 CER ANT S *Don Quixote* PART I XIa XVId passim 1b c PART II 251a 252a
30 BACON *Ad ncement of Learning* 11b 12c 24a 39b-d 68a b 99b c
33 PASCAL *Pensées* 26-29 175b 176a
35 LOCK *Human Understand ng* K III CH X SECT 34 299d 300
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37 FIELDING *Tom Jones* 49a 50c
43 FEDERALIST NUM ER 24 87b 88 NUMBER 29 100a b
44 BOSW LL *Joh son* 284b 353c 354a
49 DARWIN *Orig n of Species* 40 d
51 TOL TOY *War and Peace* BK X 534c d
53 JAM S *Psychol gy* 687a-688a 692b 693b passim
54 FREUD *Beyond the Pleasure P i ciple* 662a b

b The canon of excellence in style

5 ARISTO HANES *Knights* [373 1383] 486d 487a / *Cloud* [3 4 340] 491c-492a [518-562] 494d 495 [135 1379] 504d 505b / *Peace* [734-818] 534c 535 / *B rds* [372 1409] 559b c / *F ogs* [777-1533] 573b 582a c / *Thesm phoriazus e* [95 75] 601 602b
7 PLATO *Pr t gor s* 52d 57a / *Republ c* BK III 328b 331c
9 ARISTOTLE *Ethi s* BK IV CH 8 [11 8 18-25] 375b-c / *Pol t s* BK I CH 6 [1265 10-] 460b BK VI I CH 7 [1342 32 ^{b}18] 548a / *Rhet ric* BK III CH 1- 653b d 667b / *P etics* CH 19 [1456^{b}8-19] 692 b CH 22 694a 695a H 24 [1460 32 ^{b}4] 696c-d CH 5 [1460^{b}12 4] 696d
12 AUR LIUS *Medit t o* BK VIII S T 30 287d
14 P UTARCH *L y u g* 42 -43b / *M cus Cato* 279d / *Phoci n* 606 d

18 AUGUSTINE *Confessions* BK III par 9 15a b BK XI par 35 37 97c 98b / *City of God* BK XI CH 18 331d 332a / *Christian Doctrine* BK II CH 36 653d BK IV CH 14 684d 685b CH 17 26 686c 696a
22 CHAUCER *Troilus and Cressida* BK II ST NZA 147-149 40b-41a / *Prologue* [725-746] 171b 172a / *Miller s Prologue* [3167-3186] 212a b / *Clerk s Prologue* [7888-7932] 295a 296a / *Squire s Tale* [10 715-722] 345b / *Franklin s Prologue* 351a / *Sir Thopas* 396a-400a / *Prologue to M l beus* 400b-401a / *Manciple s Tale* [17 154 186] 491a b
23 HOBBES *Leviathan* PART I 67b
25 MONTAIGN *Essays* 75a 77d 104d 105c 113d 114b 145d 146b 148a 149a 194c 200d passim 309c 310c 422c-423c 449b-c 453d 454a 455a d 465 d 482b 483b 502c 504b 511c d
27 SHAKESPEARE *Sonnets* XXI 589b c LXXVI 597d 598a LXXXII 598d CXXX 606a b
29 CERVANT S *Don Quixot* PART I XIIIa-c 1b c 185a b PART II 251a 252a
30 BACON *Adva cement of Learn g* 11b 12c 63b 64a 66b
31 DESCARTES *D scourse* PART I 43b PART VI 66d
32 M LTON *Vacat on Exercise* 59a-61b
33 PASCAL *Pensees* 14-16 174a b 22-35 175a 177a 48 178b
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8 AR STOTL *Posteri Analytics* K II CH 13 [97^{b}38 39] 133c / *T pics* K VIII CH 3 [58^{b}8-17] 215b
9 ARI TOTLE *Parts of Anim l* BK I CH 161a 165d p ssim esp [639 1 ^{b}] 161a d / *Rhet ric* BK I CH 2 [358 3-26] 597d 598b CH 4 [359^b 1-18] 599d BK CH 1 [14 4] 654a
12 LUCRETIUS *N tur f Th ngs* BK I [9 -95] 12b
12 EPI T TU *Di cour* K II CH 23 170a 172d BK II H 3 203a b
14 PLU ARCH *Phocion* 606c d

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54 FREUD *General Introduction* 450b / *Group Psychology* 668c

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7 PLATO *Phaedrus* 137b
9 ARISTOTLE *Rhetoric* BK I CH I [1354b22-1355 3] 593d 594a CH 3-15 598b 622d esp CH 3 598b 599c BK II CH 18 639a c BK III CH 12 [413b3 1414 17] 666b-667a passim H 13 14 667b-669c passim CH 16 [1416b15]-CH 17 [418b23] 670c 673b passim
12 EPI TETUS *D sc urses* BK III CH 23 201a 203b
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23 H BB S *Leviathan* PART I 67c PART II 1 7d
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9 AR TOTLE *Rh t ic* K CH 26 [403 33-b3] 653c BK CH I [1403b5-13] 653b CH 13 19 667b-675a c
25 M NTAIGNE *E says* 466a
30 B CON *Adv cement of Le rn g* 58c 59a 68a b

4c The use of language for persuasion ora tor cal style

7 P ATO *Prot go a* 50d 52d 57a c / *Sympo m* 172c / *Apology* 200a c
9 ARISTOTLE *Rhe ic* K CH I 12 653b d 667b esp CH I 653b d 654c
12 LUCRETIUS *Natu of Th gs* BK I [921-950] 12b c BK IV [1 25] 44 b
12 E CT TU *D co es* K CH 8 113d 114c K I I CH 23 201 203b
14 P UTARCH *Lycu gus* 42c-43b / *Alcibi des* 159 b / *M c is C to* 279d 81b / *Demos then s* 692d 695d / *C cer* 706a 713b-715a
18 A USTINE *Co f s ons* K V par 0-11 29b 30a / *Chr st n D ctri e* BK I CH 36 653d BK IV CH 10-12 682c 684 CH 17 6 686c 696a
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4 The means of persuasion the d stinction between artistic and nart stic me ns

7 PLATO *Phaed s* 131b 138
9 ARI TOTLE *Rhetoric* BK I CH 2 [1355b36-1356a25] 595b d CH 15 619d 622d BK II CH I [1377b21-1378 19] 622b d 623a BK III CH I [1403b5 3] 653b CH 7 659a 660a CH 16 [1416b15-22] 670c d CH 19 [419b10- 3] 674
18 AUGU TINE *Christian D ctrine* BK IV CH 4 676d 677a
47 GO THE *Fau t* PART I [522-557] 15a b

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4 HOMER *Il ad* BK III [2 3 24] 21a b
6 H ODOTUS *History* BK VIII 271c d
6 THUCYDIDES *Pel p n e ian War* BK I 358d 360 365 369a 370 c 378c d 379b d 385a b BK II 395d 399a 402b 404a K I 425 -429 429d 434a BK IV 478d-479b BK V 484a 504 507c BK VI 511c d 512c 513d 519c 520d 533a c 534b c
7 P ATO *Phaed u* 136a 137 / *C tias* 478b d
9 ARISTOTL *Rhet ric* K I CH 2 [1356 1 25] 595b d CH 9 608 611c CH 15 [376 24 32] 621a BK II CH [1377b21 1378 19] 622b d 623a CH 2 [388b31]-CH 18 [1391b2] 636a 639b CH 2 [1395 8-b 9] 643a K I I CH 7 [14 8 10-37] 659a c CH 14 [415a25-b21] 668 669b CH 16 [14 7 16-b12] 671b d CH 7 [4 8b 3 33] 673b c CH 9 [1419b 0- 9] 674
13 VIR I *Aeneid* X [142-156] 107a
14 PLUTARCH *Pericle* 129b 130b
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18 AUGU T NE *Christ a Doctrine* BK IV CH 6 678a CH 27 8 696a 697a
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27 SH KES ARE *C i lanus* A T C [5-19] 351d 353 ACT II SC I [44 6] 366b 367d
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30 BACON Advancement of Learning 99c
42 KANT Pref Metaphys cal Elemen.s of Ethics 376c d

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8 ARISTOTLE Prior Analytics BK II CH 27 92a 93a,c
9 ARISTOTLE Rhetoric BK I CH I [1355 4 17] 594b CH 2 [356 36-1358 35] 596a 598b CH 9 [1368a31 33] 611c K II CH 20 [1394 9]-CH 26 [1403b1] 641d 653a c BK III CH 17 672a 673
12 EP CTETUS Discourses BK I CH 8 113d 114c
42 KANT Pref Metaphysical Elements of Ethics 376c d

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8 ARISTOTLE Topics K I-VII 143a 211a c
9 ARISTOTLE Rhetoric BK I CH 2 [1356a21-29] 59 d CH 2 [1358a2]-CH 15 [1377b13] 597d 622d K II CH 18 [1391b23]-CH 19 [1393a20] 639b-640d CH 22 [395b20]-CH 26 [1403 34] 643c 653a c
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7 PLATO Euthydemus 74d 75a / Pha d us 115a 141a,c esp 136a 141a c / Apology 200 d 208c 209b / G rgias 252a 294d
9 ARISTOTLE Rhetoric BK 593a 622d esp CH I [1354 1355b22] 593a 595a
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42 KANT Judgement 535b-c
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6 THUCYDIDES Peloponnesian War BK III 425a d BK VIII 584b 585a
7 PLATO Phaedrus 131b 138c / Symp sium 161b-d / Apol gy 200a c / Gorgias 252a 294d / Theaetetus 525c 526a 544a c / Philebus 634b 635a
9 ARISTOTLE Rhet ric BK I CH I [1355a21 b7] 594c d CH 2 [1356b36-1357a7] 596c [358 3 26] 597d 598b BK III CH I [1404 2] 654a
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7 PLATO Ap l gy 208c 209b / G rg as 252a 294d / Republ K II 314 / Sophist 579a d
9 ARI TOTL Rhet BK I H I [354 1355 3] 593a 594a CH 2 [1356 1-13] 595b c CH 3 5 598b 622d BK CH [1377b 1-378 9] 622b d 623a CH 2 [39 8 b 9] 643a
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18 AUGUSTINE *Ch i tian Do trine* BK II CH 37 653d 654b BK I CH 8 686d 687d CH 24 694b c CH 7 30 696a 697d
19 AQU NAS *Summa Theologica* PART I II Q 7 A 2 R 3 652d 653c
23 HOBB S *Leviathan* PART I 77d PART II 106a b 127d 128b 129b c
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30 BACON *Advancement of Learning* 66b 69c esp 66c d
32 MILTON *Areopag t ca* 382a 383a
43 FEDERALIST NUM R I 29d 30c
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7 PLATO *Ph edrus* 136a 138 141a c
8 AR TOTL *S phisti al Refut tions* CH 34 [183b 7 184b1] 253a c
9 AR TOTLE *Rheto c* 593a 675a c esp BK I CI I [354 12 1355 3] 593a 594a
14 PLUT RCH *Per les* 124d 125a / *Dem then s* 692d 696a
18 AUGUSTINE *Co fessions* BK I par 27 2) 7c 8b BK III par 6-7 14b d K IV par 19d BK V *par 22 23* 33b 34a BK IX pa 2 61d 62a / *Chr sti n Do t ine* BK IV CH 3 676a d CH 5 677a d
30 BACON *Adv cement of Learning* 11b 12c 31a d 66b c
39 S TI *Wealth f Nat ns* BK V 338d 339a
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7 PL TO *Pha drus* 141a c / *Apol gy* 200 212a / *Gorg as* 285 294d / *Republ* BK VI I 413d-416a
8 A ISTOTL *Soph t l Refutations* CH 34 [183 7 184b1] 253a-c
9 ARI TOTLE *P l tic* BK IV C 4 [1292 4 38] 491b d BK V I 5 [1305a7 15] 506d / *Ath ni n Co st tut on* 28 P 3 4 565d 566 / *Rhet c* BK I CH I [1354 12 355 3] 593a 594a BK III CH I [1403b15 14 4 39] 653b d 654c

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15 TAC TUS *Annals* BK XI 101c 102a BK XIII 126a b
23 HO BES *Le athan* PART II 106a b
25 MONTAIGNE *Essays* 147b 148a
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32 M LTON *Areopagitica* 383a
36 S RNE *Tristram Shandy* 290 b
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39 S ITH *Wealth of Nations* K V 338d 339a
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43 FEDERALIST NUM R 58 181b c
43 MILL *L berty* 284b d / *Rep sentative Gov rn ment* 331a 361b 362c 375a 377a
44 BOSWELL *Joh son* 374a c
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4 HO ER *Iliad* BK I [59 303] 3d 6a BK II [56-394] 10c 13d BK VIII [1 37] 51 b BK IX [25-655] 59c 63c BK X [203 253] 67a c K XI [655 803] 79a 80c BK XII [309-3 8] 82b c BK XIX [54 275] 137c 139d
5 AR STOPH NES *Acharnians* [352-627] 459c 462b
6 H ODOTUS *H story* BK V 182b-d BK II 214d 220a K VIII 269c 270c 279b 280b 286b 287d
6 THUCYD DES *Pelop nesian War* BK I 357a 360d 365 371b 378c 380a 384c 386c BK II 389d 390b 395 399a 402a-404d 411b-412c K III 418d-420c 424d 429a 429d 434c K IV 449b c 451a-452c 461b-463 468 469b 469d-470b 478d-479b BK V 484a c 504d 507c BK VI 511c 516a 518a 520d 529b 534d BK VII 555b 557b 559d 560b
7 PLATO *Phaed us* 115a 141a c / *Sympos m* 169c 172d / *Apol gy* 200 212a c
13 V R I *Aen d* BK XI [234 444] 334b 340a
14 P UTA CH *Per les* 124d 125b / *Cor l nus* 179c 184c / *Aem l us Paulus* 217d 218a 226c 227c / *Cato the You ger* 628b d 643 644b / *Demosthenes* 697c 698b / *Ci ero* 709a b 719d 720a / *Marc s B utus* 815d 816a

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18 AUGUSTINE *Christian Doctri e* BK IV CH 7 678c 682a CH 20–21 688 693c

24 R BELAIS *G rg ntua and Pantagruel* BK II 101b-106a

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27 S AK SPEARE *Coriolanus* ACT I SC I [I 167 351a 353a

30 B CON *Advancement of Le rning* 23a 26a 69a b

32 M LTON *Paradis Lost* K II [I 487] 111a-121b BK V [663–904] 189b 195a BK VI [414–495] 205a 207a / *Areopagitica* 381a 412b esp 381b 383b

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52 DOSTOEV KY *Brothers Karamazov* BK VI 148c 170b BK XII 369a 398d

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The role of rhetoric in the sphere of philosophy and its relation to or distinction from dialectic and sophistry *see* DIALECTIC 5 PHILOSOPHY 6b TRUTH 4d

The function of oratory in the sphere of politics *see* DEMOCRACY 7a EMOTION 5d STATE 8d(2)

D scussions relevant to the broad conception of rhetoric as the art of achieving eloquence and effectiveness in any sort of discourse and as concerned with problems of style and principles of interpretation *see* LANGUAGE 3a 6 12 POETRY 8b–8c SIGN AND SYMBOL 4c–4d

Discussions relevant to the narrow conception of rhetoric as the art of oratory and as concerned with the means of persuasion in the sphere of action *see* EMOTION 5d HONOR 3a–3b INDUCTION 4b REASONING 5d TRUTH 4d

ADDITION AL READINGS

Listed bel w re w ks n t in luded n *Gre t Book of th Western Wo ld* but le a t t the idea and top cs with h h th chapter d al The e wo ks a e d ided nto tw group

I Wo k by thor rep esented in th s coll t on

II Works by authors not epres nted i th coll t n

For the dat pl ce d ther fa ts nc ing the publ t n of the wo ks cited c sult the Bibliography f Add tion l R di hich foll w the l t chapter of *The G eat Id as*

I

TA ITUS *A D logue O at ry*

PLUT RC Li of the T n O ato n *M al a*

AU USTI *D P den d th P blem f E l*

—— *The H rm y of th G p ls*

HOBBE *Th W h l A t f Rh to*

II

ISO RA ES *A g et cu*

—— *Ag t th S ph ts*

—— *P eg cu*

—— *Ant d*

D O TH N *Ph l pp s*

C RO *O t*

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Chapter 82 SAME AND OTHER

INTRODUCTION

THE problems of identity and diversity—of sameness and otherness similarity and difference—occur at that level of philosophical thought which deals with being and with unity Plotinus for example says that in addition to Being Motion and Rest we are obliged to posit the further two Identity and Difference so that we have in all five genera

In Aristotle s conception terms like being one and same have a greater universality than the terms he calls the highest genera *e g* substance quantity quality relation and so forth These latter represent categories or classes under which certain things fall and others do not Not everything is a substance or a quantity but in Aristotle s opinion there is nothing of which it cannot be said that it is a being in some sense that it has some kind of unity that it is identical with itself and that compared with anything else in the whole universe it is in certain respects the same in others d fferent

The fundamental relation of quantities with one another namely equality con ists in their being the same The fundamental relation of qualities consists in their being alike or the same in spite of some d fference in degree or intensity *e g* a brighter and a darker red of the same hue The notion of relation itself seems to be as fundamental as that of sameness since in comparisons one thing is said to be the same or different only in relation to something else yet it also seems to be true that relations can be the same or similar for the essence of proportion or analogy l es in one thing s being related to a second as a third is to a fou th The sameness of two relationships is the object of the comparison

Such considerat ons are sometimes called metaphysical w th an invid ous tone But no one not even those who would eliminat meta physical discussion as indulging in vicious ab stractions or as verging on the meaningless can easily avoid such notions as identity and diversity It is not merely that ordinary speech as well as scientific discourse must use such words as same and other almost as frequently as the words is and not or one and many Those who are critical of theorizing and who want to save discourse itself from be coming too metaphysical are still obliged to give some account of what it means for things to be the same or different and of how we know when they are

Semantics currently has vogue as a critical instrument for safeguarding discourse from ambiguity and nonsense and perhaps also for spotting metaphysical legerdemain But seman tics itself cannot go far in its own analysis of words and meanings without having to explain how the *same* word can have *different* meanings or how the *same* meaning can be expressed by *different* words It does not seem likely that an adequate explanation could be developed with out some theory of sameness and otherness

THE SENSE OF SAMENESS says William James is the very keel and backbone of our think ing He is here speaking of the sense of same ness from the po nt of view of the mind s [illegible] ture alone and not from the point of view of the universe Whether there be [illegible] real sameness in *th ngs* or not or whether the mind be true or false in its assumptions of [illegible] on the point remains that the [illegible] makes cont nual use of the *notion* of [illegible] and if deprived of it would have a [illegible] from what it has [illegible] cal sense of ident ty sam[illegible] upon us from the outer [illegible] be none the wiser [illegible] sen e on the other [illegible]

be an unbroken flux and yet we should perceive a repeated experience

James distinguishes three principles of identity In addition to the *psychological* law according to which we feel a later experience to be the same as an earlier one he refers to the *ontological* principle which asserts that every real thing is what it is that *a* is *a* and *b b* and the *logical* principle which declares that what is once true of the subject of a judgment is always true of that subject James seems to think that the ontological law is a tautological truism whereas the logical and the psychological principles have further implications not immediately obvious Locke appears to take a contrary view He finds the identity of all *ideas* self evident while to him the real identity of *things* is much more difficult to grasp

The principle of identity and its companion principle of contradiction are according to Locke expressed in the propositions Whatsoever is is and It is impossible for the same thing to be and not to be — these two general propositions amounting to no more in short but this that the same is the same and the same is not different But Locke adds the mind without the help of any proof or reflection on either of these general propositions perceives so clearly and knows so certainly that the idea of white is the idea of white and not the idea of blue and that the idea of white when it is in the mind is there and is not absent that the consideration of these axioms can add nothing to the evidence or certainty of its knowledge I appeal to every one s own mind whether this proposition A circle is a circle be not as self evident a proposition as that consisting of more general terms Whatsoever is is.

But unlike the comparing of an idea with itself real identity according to Locke requires us to consider a thing as ex sting at any determined time and place and to compare it v ith itself ex st ng at another time W] en therefore v e demand whether anything be the same or no? it refers always to something that existed at such a time in such a place which it was certain at that instant was the same with itself and no other from wl ence it follows that one thing cannot have two begin n ngs of existence nor two th ngs one beginning it being impossible for two things of the same kind to be or exist in the same instant in the very same place or one and the same thin in different places That therefore that had one beginning is the same thing and that which had a different beginning in time and place from that is not the same but diverse In short across a lapse of time a thing remains identical in Locke s view or maintains its identity if existence having made it one particular thing under any denomination the same existence continued preserves it the same individual under the same denomination

This understanding of real identity Lo ke applies without difficulty to an atom of matter which being at a given instant what it is and nothing else is the same and so must continue as long as its existence is continued for so long it will be the same and no other In like manner if two or more atoms be joined together into the same mass every one of those atoms will be the same by the fore oin rule and whilst they exist united together the mass consisting of the same atoms must be the same mass or the same body let the parts be ever so differently jumbled But Locke continues if one of these atoms be taken away or one new one added it is no longer the same mass or the same body

The problem of identity in living organisms Locke does not find so easy to solve In the state of living creatures he says their identity depends not on a mass of the same particles, but on something else For in them the variation of great parcels of matter alters not the identity an oak growing from a plant to a great tree and then lopped is still the same oak and a colt grown up to a horse sometimes fat sometimes lean is all the while the same horse though in both these cases there may be a manifest change of the parts so that truly they are not either of them the same masses of matter

The problem of the real identity or continu ty of living things through time and change is as we shall see presently only a special case of the larger problem of whether anythin, at all remains identical for more than an inst nt in the universal flux of thin,s But supposing that problem solved in favor of en-

during substances or things which somehow remain continuously the same while changing in this or that respect the point of Locke s observation about living things still holds for their identity does not seem to lie in the con tinuity or permanence of the matter—the particles—of which they are composed

The familiar riddle about the pipe—whether it is in any respect the same after it has its broken bowl replaced by a new one and then has a new stem added to the new bowl—may be propounded for living organisms But in their case Locke argues a principle of identity can be found A plant he says continues to be the same plant as long as it partakes of the same life though that life be communicated to new particles of matter vitally united to the living plant in a like continued organization con formable to that sort of plant

The principle he thinks applies to animals and men The case is not so much different in brutes but that anyone may hence see what makes an animal and continues it the same Something we have like this in machines and may serve to illustrate it For example what is a watch? It is plain it is nothing but a fit organization or construction of parts to a cer tain end which when a sufficient force is added to it it is capable to attain If we v ould sup pose this machine one continue l body all whose organized parts were repaired increased or diminished by a constant addition or separa tion of insensible parts with one common life we should have something very much like the body of an animal This also shows wherein the identity of the same man consists *viz* in nothing but a partic pation of the same con tinued life by constantly fleeing particles of matter in succession vitally united to the same organized body

IN THE CASE OF MAN however Locke thinks we must face the additional problem of per sonal identity What makes a man the same person from moment to moment sleeping and waking remembering or not remembering his past? In what d es the continuity of the s lf consist on the id ntity of which Locke insists is founded all the right and justice of reward and punishment ? H s answer seems to be that as a living org nism is dentical throughout one and the same life it is the continuity of the same consciousness which makes a man be himself to himself and establishes his personal identity

Whatever has the consciousness of present and past actions Locke writes is the same person to whom they both belong That with which the consciousness of this present thinking thing *can* join itself makes the same person and is one self with it and with nothing else If the same Socrates waking and sleeping do not partake of the same conscious ness Socrates waking and sleeping is not the same p rson And to punish Socrates waking for what sleeping Socrates thought and waking Socrates was never conscious of would be no more right than to punish one twin for what his brother twin did whereof he knew nothing because their outsides were so like that they could not be distinguished

William James also attributes the sense of personal identity to continuity of conscious ness but for him there till remains a problem of explaining that continuity In the flow of consciousness from moment to moment con tinuity he thinks makes us unite what dis similarity might otherwise separate similarity makes us unite what d scontinuity might hold apart The sense of our personal identity then is exactly like any one of our other per ceptions of sameness among phenomena It is a conclusion grounded either on the resemblance in a fundamental respect or on the continuity before the mind of the phenomena com pared

In his opinion *resemblance among the parts of a continuum* of feelings (especially bodily feelings) experienced along with things widely different in all other regards *thus constitutes the real and verifiable personal ident ty which we feel* There is no other identity than this in the stream of subjective consciousness Its parts differ but under all their differences they are knit in these two ways and if either v ay of knitting disappears the sense of unity dep rts If a man wakes up some f ne day unabl to re call any of his past experience so that he h s to learn his b ogr phy afresh he *f els* and he *says* that he is a changed person H diso ns his former me g ves himself a new name den t fies his present l fe w th noth ng from out of

the older time Such cases are not rare in mental pathology

In the tradition of the great books other solutions are offered to the problem of personal identity Kant thinks for example that a transcendental unity of apperception is nec essary to constitute in all possible phenom ena which may come together in our experi ence a connection of all these representations according to laws Unity of consciousness he writes would be impossible if the mind in the knowledge of the manifold could not become conscious of the identity of function by which it unites the manifold synthetically in one knowledge Therefore the original and neces sary consciousness of the identity of one s self is at the same time a consciousness of the equal ly necessary unity of the synthesis of all phenom ena according to concepts

Where Kant posits a transcendental ego to account for the experienced identity of the self other philosophers who hold one or an other theory of the soul as an imperishable sub stance or an unchanging principle seem to find no special subtleties in the problem of the identity of living organisms or persons So far as such theories bear upon that problem the consideration of them belongs to the chapter on SOUL Here we are concerned with the no tions of same and other as they apply to every thing in the universe Hence we must face all the problems of how two things can be the same not merely the problem of self sameness or the identity of a thing with itself

THE WORD IDENTICAL is sometimes used as a synonym for same as when we say that two things are identical in a certain respect But without the qualification expressed by in a certain respect it is seldom if ever said that two things are identical for if they can be dis criminated from one another in any respect at all they are two not one and therefore not identical This seems to be the sense of Leib nitz s principle of the identity of indiscernibles concurred in by all who understand identity as the self sameness of that which is one in num ber and existence A plurality of things involves a numerical diversity—each of the many being an *other* To this extent at least the tradit onal discussion of same and other tends to merge with matters discussed in the chapter on ONE AND MANY

For both Plato and Aristotle the relation between these two pairs—*one and many* and *same and other*—seems to be much closer In the comparison of two things Aristotle appears to treat sameness as a kind of oneness referring to the various ways in which two things can be one and the same Of sameness he says that it is a unity of the being either of more than one thing or of one thing when it is treated as more than one and of the one he says that to it belong the same and the like and the equal and to plurality belong the other and the unlike and the unequal

The enumeration he gives of kinds of unity seems to be paralleled by his enumeration of kinds of similitude As a thing may be one es sentially or one by accident so two things may be the same essentially or by accident Aris totle s statement that some things are one in number others in species others in genus others by analogy finds its counterpart in his statement that different is applied to those which though other are the same in some respect only not in number but either in species or in genus or by analogy

As indicated in the chapter on RELATION a distinction is traditionally made between re lationships which really exist among things apart from the mind and logical relationships which occur in thought alone This distinction seems to separate self sameness or identity from all relations of similitude which obtain between two things The relation signified by the term *the same* Aquinas says is a logical relat on only if it is taken in regard to absolutely the same thing because such a relation can exist only in a certain order observed by reason as regards the order of anything to itself The case is otherwise however when things are called the same not numerically but generi cally or specifically

Nevertheless identity seems to underlie all other relations of sameness for among things or ideas lacking identity no comparisons can be made Those who deny identity on the ground that everything is in flux nullify all further dis cussion of sameness The theory of a universal flux which Plato attributes to Heraclitus per mits noth ng ever to remain stationary or the

same for an instant and the professed Heraclitean Cratylus went even further according to Aristotle he criticized Heraclitus for saying that it is impossible to step twice into the same river for *he* thought one could not do it even once

In saying of men that they are *nothing but a bundle or collection of different perceptions* which succeed each other with an inconceivable rapidity and are in a perpetual flux and movement Hume does more than deny personal identity He affirms an utter diversity— as if there were no manner of relation at all—between distinct perceptions each of which is for him a distinct existence The opposite point of view affirms things which have an enduring existence and which can as Aristotle says of substances undergo change in many respects while remaining numerically one and the same

TIME AND CHANGE raise the question of how any one thing can be the same from moment to moment The question of how two things can be one and the same in any respect arises from the simple fact that at the instant of comparison they are two If they were the same only for the comparing mind then their sameness would be a logical and not a real relationship For two things to be the same in reality seems to imply that although two in number they are one in some respect To use Hegel s language there is identity in diversity or in the language of Aquinas a real community exists according to which some one thing is common to two

The problem of the sameness of two things can be stated in terms of the significance of what Hobbes Berkeley and Hume call common or general names Denying that such words as man or tree or stone express abstract or general ideas they seem to say that common names like these sign fy what is common to two or more individuals—whether things perceptions or ideas Those who like Aristotle Aquinas and Locke take general or common names to signify abstract ideas seem to say such ideas themselves signify that in reality two or more things have something in common Still another view is that apart from all individual things real universals exist as the objects of the mind s conceptions

If the latter alternative is chosen then two individuals—two men for example—may be thought alike only because both somehow resemble as Plotinus suggests the separate archetype Man What is common to the two men lies in a third and separate reality of which Plotinus says that it is present in multiplicity as if in multi impression from one seal But as Parmenides observes in Plato s dialogue of that name if a separate idea of Man is required to explain how two individuals are alike in being men then still another idea is needed to account for the likeness between each individual man and the idea Man

On the other hand the view that the real sameness of two individuals or the reality of the one kind to which both belong resides in them—in their common possession of the same nature quality or other attribute—seems to lead to the difficulty already intimated namely the difficulty of understanding how distinct existences can have anything in common—how they can be two in number and yet also one in nature If John and James are alike as men because they share a common humanity then can it be said that each has *his own* human nature? If their natures and properties are as individual as their existences how can two things be *really the same* in any respect? Must not kinds or universals—or whatever is supposed to be common to many and the source of their sameness—exist only in the general meaning of words or in the mind s abstract concepts or as separate archetypes? But then what truth is there in the familiar statement that two individual things are in some respect *really* alike or the same?

THESE QUESTIONS indicate that the traditional discussion of the *same and the other* tends to involve not merely the theory of the one and the many but also in certain issues at least the problem of the individual and the universal As the chapter on UNIVERSAL AND PARTICULAR shows the several positions traditionally take with regard to universals afford differ [illegible] swers to the problem of how any same[illegible] tween two or more things exists [illegible] similitude in knowledge (the natu[illegible] n ss b twe n mag o s lea and [illegible] the fun t on of s militude [illegible]

tion or repulsion of like by like) also extend the consideration of sameness and diversity into the field of problems dealt with in other chapters Here attention must be given to the meaning of sameness itself as that is affected by the distinction between the same and the similar by the enumeration of various kinds or degrees of likeness and by the range of opposite meanings in the notions of diversity and difference

Discussing discrimination and comparison William James for example draws a sharp line between the simple and complex components of our experience Simple impressions he seems to think are either absolutely alike or absolutely unlike Here there can be no degrees of resemblance or similarity Two resembling things he writes owe their resemblance to their absolute identity in respect to some attribute or attributes combined with the absolute non identity of the rest of their being This which may be true of compound things breaks down when we come to simple impressions The latter apart from their numerical non identity or otherness are either the same in quality or diverse But compound things may be more or less alike varying in degree of similarity or difference according to the number of simple respects in which they are or are not the same

Similarity in compounds says James is partial identity and he gives the following illustrations The moon is similar to a gas jet it is also similar to a foot ball but a gas jet and a foot ball are not similar to each other Moon and gas jet are similar in respect of luminosity and nothing else moon and foot ball in respect of rotundity and nothing else Foot ball and gas jet are in no respect similar—that is they possess no common point no identical attribute

Other writers seem to agree on this distinction between the same and the similar the diverse and the different The latter in both cases combine elements of sameness and diversity to give degrees of likeness Aquinas for example says that we seek for difference where we also find resemblance For this reason things which differ must in some way be composite since they differ in some respect and in some respect they resemble each other In this sense although all things that differ are divers yet all things that are diverse do not differ For simple things are diverse through themselves and do not differ from one another by differences as their components For instance a man and an ass differ by the difference of rational and irrational but we cannot say that these again differ by some further difference

The specific difference between man and ass with respect to rationality accompanied by their generic sameness with respect to animality makes them similar If they were utterly diverse *i e* the same in no respect they would not be said to differ just as if they were identical in all respects except number they would not be called similar The other and the same writes Aristotle are thus opposed But difference is not the same as otherness For the other and that which it is other than need not be other in some definite respect but that which is different is different from some particular thing in some particular respect so that there must be something identical by which they differ

But within the area of this agreement on fundamental terms there seems to be some disagreement about whether two things can be utterly diverse Since they are two they cannot be the same in *all* respects—certainly not in number—but can they be totally incomparable? James appears to say Yes in his remark about the football and the gas jet having no common point no identical attribute Yet he also seems to hold that no two things are ever absolutely incomparable They may not differ or be similar as the diverse species of the same genus *e g* man and ass but regarding them as thinkables or existents he writes even the smoke of a cigarette and the worth of a dollar bill are comparable—still more so as perishables or as enjoyables The gas jet and the football would appear to be comparable also as existents or usables —or even perhaps as bodies

The question thus arises whether—all things being somehow comparable—they are all the same in genus as for example all three-dimensional material things may be said to belong to the genus body no matter how much else they differ as species or subordinate kinds within this genus Kant answers this question by affirming a principle of ultimate homogeneous

ness According to this principle there are no different original and first *generi* as it were isolated and separated from each other but all diverse *genera* are divisions only of one supreme and general *genus* Kant states a correlative principle of variety or specification according to which every *genus* requires *species* and these again *sub species* and as none even of these *sub-species* is without a sphere reason in its utmost extension requires that no species or sub species should in itself be considered as the lowest

Aristotle s theory of species and genera appears to be exactly opposite to Kant s on both points For Aristotle there is no single all embracing genus but rather a number of diverse yet supreme genera such as substance quantity quality etc There is a finite not an infinite variety of species The lowest species is further d visible only into kinds which differ as ind viduals of the same species do in accidental not essential respects *e g* white man and red man differ in the same way as John and James do within the species man not as the species man and ass differ within the genus animal Furthermore where Kant insists upon a third principle of continuity according to which between any tv o species there alv ays remain possible intermediate species differing from the first and the second by smaller degrees than those by which these differ from each other Aristotle seems to find no intermediates possible between the contrary species of a single genus The order of species is for him a discontinuous series like the order of the whole numbers between proximate members of which no fractions are admitted

Does Aristotle s position with respect to the *heterogeneity* of an animal and the color blue—the one in the genus substance the other in the genus quality —mean that such th ngs *absolutely diverse in genus* are absolutely incomparable? His answer seems to be twofold In one place he says that things which are diverse in genus m y still be the s me by analogy th ngs that are one by analogy are not all one in genus In another he gives us an example of analogical resemblance (betv een the soul and the hand) As the hand is a tool of tools so the m nd is the form of forms and sense the form of sensible things

If the example seems inappropriate on the ground that the soul and the hand are of the same genus *i e* both substances or parts of the same sub tance *man* it may be necessary to introduce the distinction between natural and logical genera According to this distinction a material and a spiritual substance can both be called substances as a matter of logical classification but they are not in the same genus by their own natures In this sense Aquinas assigns a geometrical solid and a physical body to the same logical genus body but regards them as of heterogeneous natures and Descartes calling an extended and a thinking substance both substances insists upon the utter diversity of their natures

An easier example however may not be too difficult to find A man and a number belong to different genera according to Aristotle—one a substance the other a quantity But the man can be related to his sons as the number *one* is related to any other whole number The relation which is the same in both cases is that of priority according to which the man and unity are the principles or generators respectively of his sons and other numbers Here then we see two heterogeneous thin s—a substance and a quantity—wh ch are nevertheless the same by analogy *each standing to another in the same relat onship* both therefore can be called principle or generator analogically

Aristotle s other indication that a special mode of similitude obtains betv een heterogeneous things occurs in all those passages in which he says that terms like being can be predicated of things in every category or genus Just as James seems to think that any two things may be comparable as thinkables or existents so Aristotle seems to hold that all things though otherwise heterogeneous are at l ast alike in *being i e* n having some mode of existence Yet the term being cannot be equated with Kant s sin le sup eme genus Though Aristotle agrees with Kant that every genus must be capable of division into species he does not think that being can be so div d d by specific differences

TWO POINTS MUST be observed o ce n ng Aristotle s th ory of tl e pred cation of t rm like be ng of ev ryth ng n th un v rse

First he repeatedly asserts that being is not said *in the same sense* of substances quantities qualities and so forth Hence when such heterogeneous things are all called beings the implication cannot be that as beings they are all the *same* The point seems to be that they are somehow *at once both the same and diverse* As to use an example from Aristotle s *Physics* a tone and a taste can both be sharp though the sharpness of a tone is as diverse from the sharpness of a taste as tone and taste are qualitatively diverse from each other so a man and a number can both have being though their modes of being are as diverse as substance is from quantity If the word similarity were to be used to signify not the combination of separable elements of sameness and diversity but rather the inseparable fusion of the two to constitute a *diversified sameness* then heterogeneous things should be called *similar* not the same in being

Second Aristotle does not identify such similarity of heterogeneous things with the sameness by analogy which heterogeneous things can have Being is not a relative term and therefore it cannot be predicated analogically as principle or generator can be Terms which are predicated analogically as principle can be predicated of a father and the number one may signify *similarity* (in the sense of *diversified sameness*) rather than simple sameness in a single respect The relation of generation which creates the analogical similitude between a father and the number one seems to be the same relation in the two cases (between a father and his sons and between one and other numbers) it is not however simply the same for that relation is diversified according as the things related—substances in the one case quantities in the other—are absolutely diverse in genus But in Aristotle s analysis it does not follow that because some analogical predicates signify *diversified* rather than *simple* sameness all do or that because some instances of *diversified sameness* happen to be analogical (*i e* sameness in a relation) all are

The interest in Aristotle s separation of these two points lies in the fact that Aquinas combines them in a theory which states that when being and other terms (which are not genera and yet are above all genera) are predicated of heterogeneous things they must be predicated analogically of them The existence which is found in all things he says is common to all only according to some sort of analogy not according to the same specific or generic formality This is most easily seen in the likeness of creatures to God which is solely according to analogy inasmuch as God is essential being whereas other things are beings by participation

Aristotle s statement that things which are one by analogy are not all one in genus seems to be converted by Aquinas into the proposition that *things which are not one in genus and yet are alike in some way are all one by analogy* For Aristotle sameness by analogy may be either simple sameness or diversified sameness (*i e* similarity) and diversified sameness may or may not be analogical that is it may be the kind of similarity which two heterogeneous things have in respect to being or in respect to some relation in which they stand to other things For Aquinas on the other hand whenever heterogeneous things are the same in any single respect their diversified sameness is *always analogical* and whenever the similitude between two things is truly analogical then it is *always similarity* that is a diversified not a simple sameness Likeness in being according to Aquinas affords us the prime example of a similitude which is at once an analogical and a diversified sameness

Aquinas applies his theory of the analogy of being to the great traditional issue which puts all theories of similitude to the test—the question of the resemblance between God and creatures or between infinite and finite being Against the answer first given by Maimonides, and later expressed by Spinoza when of all comparisons between God and man he says that His essence could resemble ours in nothing except in name and against those on the other hand who think that whatever names apply to both God and creatures (such as being or good or one) apply simply in the *same* sense Aquinas seems to take the middle ground The names which are properly applicable to both God and creatures according to him are said of them not equivocally and not univocally but analogically

This threefold distinction of univocal equiv

ocal and analogical names especially as it concerns the names of God is discussed in the chapter on SIGN AND SYMBOL. The theological problem of the similitude between God and creatures confronts us with three basic alternatives in man s speculation about the sameness and diversity which exists among all things We can say (1) that infinite and finite being are utterly diverse and have no similarity *even* in being We can say (2) that they are homogeneous—that with respect to being for example they have the kind of sameness which things have when they belong to the same genus Or we can say (3) that they are only similar in the sense of a diversified sameness whether such similarity is or is not always analogical in character

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and pa e numbers of the passages referred to For example in 4 Ho ier *Iliad* BK II [265 283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the pas sage is in section d of page 12

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lo ver halves of the page For example in 53 JA IES *Psychology* 116a 119b the passa e begins in the upper half of page 116 and ends in the lo ver half of page 119 When the text is printed in two columns the letters a and b refer to th upper and lo er halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the page For example in 7 PLATO *Symposium* 163b 164c the passage beg ns in the lower half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One or more of the main divisions of a work (such as PART BK CH SECT) are sometimes included in the reference line numbers in brackets are given in cer tain cases *e g* *Iliad* BK II [265 283] 12d

B LE REFER NCES The eferences are to book chapter and verse When the King James and Douay versions differ in title of books or in the numbering of chapters or verses the King James version is cited first and the Douay ind cated by a *(D)* follows *e g* OLD TESTA MENT *Nehem ah* 7 45—*(D) II Esd as* 7 46

SYMBOLS The abb eviation esp calls the reader s attention to one or more especially relevant parts of a whole reference passim s gnifies that the topic is discussed interm t tently rather than continuously in the ork or passage cited

For additional information concerning the style of the references see the Explanat on of Reference Style for general guidance in the use of *The G eat Ideas* consult the Preface

1 The principle of identity the relation of a thing to itself

7 PLATO *Theaetet s* **518d 519b** **521b 522b** / *Soph t* **571d 574c** esp **572d 573b**

8 ARIS OTLE *T p s* BK I CH 7 **146 c** BK VII CH I **206b d 208a** / *Metaphys* BK IV CH 5 **528c 530c** K X CH 3 **581a d**

17 P OTINUS *Sixth En ead* TR IX CH I 2 **353d 355a**

19 AQUINAS *Summa Th l gic* PART I Q 13 A 7 ANS **68d 70d** Q 28 A I REP 2 **157c 158d** A 2 REP I **158d 160** A 3 REP I **160a c** A 4 REP I **160c 161d** Q 40 A I RE I 2 **213b 214b**

31 DESCARTES *Obj ct ons and Replies* **159d 160a**

35 LOCKE *Human Understa d g* BK I CH III SECT 3-5 **113a c** BK I CH XX I SECT I **218d 219b** K IV CH I SECT 4 **307b c c** SECT 8 **315b c** CH VII SECT 4 **337b 338b** CH VIII SECT 2 3 **345a 346b**

53 J MES *Psy hol gy* **299 301a** esp **299b** [fn]

1a One ne s n number or be ng n mer cal d ers ty or oth rness

7 PLATO *Republ* K **392a 394a** / *Theaete t* **537b c** / *S h t* **561d 574c** esp **564d 574c**

8 ARISTOTLE *Topics* BK VII CH I **206b d 208a** / *Generat on and Corrupt on* BK II CH II [338^{b}12 19] **440d-441a c** / *Metaphysics* BK III C I 4 [10 I 5 ^{b}25] **519d 520c** BK V CH 4 [1014^{b}22 26] **535a** CH 9 [1017^{b}26-1018 14] **538c d** BK VIII CH 6 **569d 570d** BK X CH 3 [1054 33 34] **581a** BK XII CH 8 [1074 31 39] **604d** BK XIV CH I [1088 8 14] **620b** / *S ul* K II CH I [412^{b}6-9] **642c**

11 EUCLID *Elements* BK VII DEFINITIONS I **127a**

11 N COMACHUS *Arithmet c* BK II **838c 839d 840a**

17 PLOT NUS *Fo rth En ead* TR IX CH 2 **205c 206a** CH 5 **206d 207a c** / *S xth E nead* TR I CH 9- I **273c 275d** TR VI C I 5 **312c 313b** CH II 16 **315d 319d** TR IX CH I 2 **353d 355a**

19 AQUIN *Summa Theologica* PART I Q 6 A 3 REP I **29c 30b** Q II A I REP I 2 **46d 47d** Q 3 **167a 171b** pass m Q 76 A REP 2 **385c 391** Q 79 A 5 **418c-419b** Q 103 A 3 A S **530 c** P RT I II Q 17 A 4 **688d-689c**

20 AQ I S *S mma Tl l gi a* PART III Q 17 **806d 809d** Q **951b 956b** pas n

31 D C RTES *Object ns a d R pl es* **152d 156a** **224d 225d**

33 PASCAL *Pensé s* 512 **262a**

42 KANT *Pure Re son* 99a 108a c esp 100a b 102b-c 105a 106b

1b The ident ty of the changing yet enduring ind idual personal ident ty the con t n ity of self the denial of identity in the re lm of change

7 PLA O *Cr tylus* 94c d 99b 113c 114a c / *Thea tetus* 517d 534b
8 ARISTOTLE *C tegories* C 1 5 6a 9a / *Physics* BK I 259a 268d BK IV CH 11 [219^{b}12 32] 299b d / *Met physics* BK IV CH 5 [1010 6-38] 529 530a BK XI CH 6 [063 10-28] 591b
11 N OMACHUS *Arithmetic* BK I 811b d
12 AUR LIU *Meditat ons* K VI SECT 15 275a b K VII SECT 6 285d 286a BK IX SECT 19 293b
20 AQUINAS *Summa Theolog ca* PART III Q 79 951b 956b passim
25 MONTAIGNE *Essays* 292c 293b 388c d
35 LOCK *Human U derst nding* BK I H III ECT 4-5 113b c BK I CH I SECT 11 12 123d 124 S CT 19 126 CH XXVII 218d 228 esp SE T 9-26 222a 227d
35 BERKELEY *Human Kn wledge* SECT 95 431c S CT 139 440d
42 KANT *Pu e Reas n* 49c 51d esp 51c d 74b 70c 120c 129 esp 121a 124d 126a 128b 200c 204c
46 H GEL *Philosophy of Right* PART I par 47 24a b
49 DA WIN *D scent of Man* 297b c
53 JAMES *Psy hol gy* 147 149a esp 147b 154a 157a 191a 192b 194b 196a 213a 259b esp 213a 219a 226a 228a 239 240a 258b 259b 299a 301

The ameness of things numer c lly diver e

The being of s m ness or s militude the re l ty of k nds or un versals

7 P ATO *C atylus* 87d 89a 113 114 c / *Ph do* 28d 230c 231 232a 240b 246c esp 242c 244b / *Republ* BK X 427c-429c / *Tim e* 457 d / *Pa menide* 480a 511d / *Th a t tus* 535a 536b / *S pl st* 570 574 / *Philebus* 610d 613a / *Seventh Letter* 809 810b
8 A I TOTL *Posterio A alytic* BK CH I [77^{a}5-9] 105d 106a CH 24 [85 31 ^{b}3] 116c [85^b 5 22] 117a / *S phisti al Refutat ns* CH 2 [178^{b}37 39] 246c / *Metaphy ic* K I CH 6 505b 506b CH 9 508 511c BK II H [995^b 3 18] 514a [995^{b}3 -38] 514b [996^{a}4-9] 514c CH 2 [997 34 2] 516a b CH 3 [998^b 4] -CH 4 [999^b 4] 517b 518c C I 4 [10 1 4 ^{b}25] 519d 520c CH 6 [10 ^{b} 3] 521b d K II CH 8 [1 33^b 9-1 34 8] 556d 557b CH [35^b 8 3] 559b H I [1037 5-9] 560 H 3 14 562a 563 H 5 [40 8 4] 564 CH 6 [104 ^{b} 6- 41 4] 564d 565 K X H 8 [050^{b}35 5 ^{a}2] 576d 577a K X CH O 586 d K XI CH I [59 39-^{b}8] 587b K XII CH 3 [1070 4 30] 599b d BK XIII C 1 4-5 610a 611d CH 10 618c 619a c
11 NICOMACHUS *Arithmetic* BK I 811b d
19 AQU NAS *Summa Theologica* PART I Q 3 A 3 ANS 16a d Q 15 A 3 R P 4 93b 94a Q 16 A 7 REP 2 99a d Q 29 A 2 REP 4 163b 164b Q 30 A 4 170c 171b Q 84 A I ANS and REP I 440d-442a A 2 ANS 442b-443c A 5 446c 447c Q 85 A I ANS and REP I - 451c 453 A 2 REP 2 453d-455b A 3 REP 4 455b 457a PART I-II Q 29 A 6 ANS and REP I 748b-749a
20 AQUIN *Summa The logica* PART III Q 2 A 5 REP 715a 716b
23 HO ES *Leviathan* PART I 55b 56a 59d
31 SPINOZA *Ethics* PART II P OP 40 SCHOL I 387b 388a
35 LOCKE *Human Understanding* BK III CH III SECT 6-20 255c 260a CH VI SECT 26-51 274d 283a esp SECT 36-37 279a b K IV CH II SECT 31 323c d CH VI SECT 4 331d 332b
35 BERKELEY *Human Knowledge* INTRO ECT 6-19 405d-410c pass m
35 HUME *Hum n Underst nding* SECT XII DIV 125 507b [fn 1]
53 JA *Ps hology* 299b 300a 305a 314a 873a b

2b The rel tion between s meness and unity s meness as a participat on in the one

7 PLATO *Parmenid s* 493b-d 498a 499a
8 ARISTOTLE *M t physics* K V CH 6 536a 537 CH 9 538c 539a BK X CH 3 581a d
11 NICOMACHUS *Arithmetic* BK II 838c 839c 840a

2c The distinction between samenes and sim il rity and the r opposites d v rsity and d fference th composition of sam ness nd d ersity degrees of likeness and difference

7 PLATO *Protagoras* 49a b
8 A TO E *Top cs* BK I CH 16-17 152a b / *Physics* BK VI CH 4 330d 333 / *Metaphysics* BK V CH 9 538 539a CH 8 [24^{b}10-16] 546c K X C I 3 [1054^{b}3 1055 3] 581b d CH 8-9 585b 586
19 AQUIN *Summa The logica* PART I Q 3 A 8 R 3 19d 20 Q 4 A 3 22b 23b Q A I R P 2 46d-47d Q 13 62b 75b pas im esp A 5 66b 67d Q 57 A 2 REP 2 295d 297a Q 93 492a 501 passim PART I I Q 27 A 3 738 739
20 AQU N S *Summa The l g a* P RT II UP Q 69 A I R 885c 886c Q 92 A I AN and R 7 1025c 1032b
30 BA ON *No um O g n m* BK I A H 2 153b APH 7 157b 158d
35 LO K *H ma U der t d* K H XXVI I S T 228
53 JA *P y h l gy* 319b 322 344b 348a esp 347 348a 378b

(2 *The sameness of things numerically diverse*)

2d The distinction of things in terms of their diversities and differences: real and logical distinctions

7 PLATO *Phaedrus* 134b-c / *Phaedo* 227d-228a / *Theaetetus* 548c-549d / *Statesman* 595a

8 ARISTOTLE *Topics* BK I, CH 7 146a-c; CH 16 152a-b; BK VII, CH 1 206b-d; 208a / *Metaphysics* BK X, CH 3 581a-d

9 ARISTOTLE *Parts of Animals* BK I, CH 2-4 165d-168c

19 AQUINAS *Summa Theologica* PART I, Q 3, A 8, REP 3 19d-20c; Q 11, A 1 46d-47d; Q 13, A 7, ANS 68d-70d; Q 14, A 6, ANS 80a-81c; Q 28, A 3 160a-c; A 4, REP 1 160c-161d; Q 30, A 1, REP 2 167a-168a; Q 31 171b-175c; Q 36, A 2, ANS 192a-194c; Q 40, A 2, ANS and REP 3 214b-215b; Q 47, AA 1-2 256a-258c; Q 50, A 2, ANS 270a-272a; A 4, REP 1-2 273b-274b; Q 75, A 3, REP 1 380c-381b; Q 76, A 3, REP 4 391a-393a; Q 77, A 3, ANS 401d-403a; Q 85, A 7, REP 3 459c-460b

20 AQUINAS *Summa Theologica* PART III, Q 2, A 3, REP 1 713a-714c; Q 17, A 1, REP 7 807a-808d

31 DESCARTES *Meditations* III 87c-d / *Objections and Replies* 114d-115a,c; 119d-120c; 136a-b; 152d-156a; 224d-225d; 231a-232d

31 SPINOZA *Ethics* PART I, AXIOM 5 355d; PART II, PROP 1-2 373d-374a; PROP 7, COROL and SCHOL 375a-c

35 LOCKE *Human Understanding* BK III, CH III, SECT 13-14 257c-258b; CH VI, SECT 7-25 270b-274d; SECT 36-42 279a-280c; BK IV, CH I, SECT 4 307b-c; CH III, SECT 8 315b-c

42 KANT *Pure Reason* 99a-108a,c esp 100a-b, 102b-c, 105a-106b; 193a-200c esp 197b-198a

49 DARWIN *Origin of Species* 25d-29a esp 28b-29a; 30d-31b; 241d-242a

53 JAMES *Psychology* 315a-336a esp 319a-320a, 322b, 324a-b, 327a-334a; 550b-551b [fn 2]; 867a-874a; 878a-880b

2e The limits of otherness: the impossibility of utter diversity

8 ARISTOTLE *Categories* CH 4 [1b25-2a4] 5d-6a / *Metaphysics* BK III, CH 3 517a-518a; BK X, CH 3 [1054b14-23] 581b-c

19 AQUINAS *Summa Theologica* PART I, Q 3, A 5 17c-18b; A 8, REP 3 19d-20c; Q 11, A 1, REP 2 46d-47d; Q 90, A 1, REP 3 480d-481d

25 MONTAIGNE *Essays* 516b-c; 518d-519a

31 SPINOZA *Ethics* PART I, AXIOM 5 355d; PROP 2-3 355d-356a; PROP 17, SCHOL 362c-363c; PART III, PROP 5 398d

42 KANT *Pure Reason* 107b-c; 197b-198a

53 JAMES *Psychology* 320a-322a esp 321a-b; 344b-345b

3 The modes of sameness and otherness or diversity

3a Essential sameness or difference and accidental sameness or difference

7 PLATO *Republic* BK V 358a-360a

8 ARISTOTLE *Topics* BK I, CH 5 [101b37-102a17] 144d-145a; CH 6 [102b27-35] 145d; BK VI, CH 1 [139a24-b2] 192a-b; CH 4 194c-196a; CH 5 [142b30-143a8] 196b-c; CH 6 [144a3-27] 197d; CH 6 [144b3]-CH 7 [146a35] 198a-200b; BK VII, CH 2 208a / *Metaphysics* BK V, CH 9 538c-539a; BK VII, CH 12 [1038a8-30] 561d-562a; BK X, CH 3 [1054b33-b2] 581a-b

9 ARISTOTLE *History of Animals* BK I, CH 1 [486a15-487a1] 7b-d / *Parts of Animals* BK I, CH 2-4 165d-168c / *Generation of Animals* BK V, CH 1 [778a15-b20] 320a-321a

19 AQUINAS *Summa Theologica* PART I, Q 3, A 3 16a-d; Q 4, A 3, ANS 22b-23b; Q 29, A 1, REP 3 162a-163b; Q 57, A 2, REP 2 295d-297a; Q 75, A 3, REP 1 380c-381b; Q 77, A 1, REP 7 399c-401b; Q 93, A 2, ANS 493a-d; PART I-II, Q 17, A 4, ANS 688d-689c; Q 35, A 8 779c-780c

20 AQUINAS *Summa Theologica* PART III, Q 2, A 3, REP 1 713a-714c; Q 17, A 1, REP 7 807a-808d; Q 79, A 1, REP 2-4 951b-953b; A 2, REP 1-2 953b-955c

31 DESCARTES *Objections and Replies* 136a-b; 152d-156a; 224d-225d; 231a-232d

31 SPINOZA *Ethics* PART I, PROP 4-5 356a-b

35 LOCKE *Human Understanding* BK III, CH III, SECT 13-14 257c-258b; CH VI 268b-283a passim, esp SECT 22 273d-274a, SECT 49 282c; CH X, SECT 20-21 296d-297b; BK IV, CH VI, SECT 4 331d-332b

42 KANT *Pure Reason* 193a-200c

49 DARWIN *Origin of Species* 212d-213c

3a(1) Specific and generic sameness: natural and logical genera

8 ARISTOTLE *Topics* BK I, CH 7 [103a6-23] 146a-b / *Physics* BK V, CH 4 [227b3-21] [308b-c]; BK VII, CH 1 [242a32-b4] 326c-d; CH 4 330d-333a / *Generation and Corruption* BK II, CH 11 [338b12-19] 440d-441a,c / *Metaphysics* BK III, CH 3 517a-518a; BK V, CH 6 [1016a24-b1] 536d-537a; [1016b32-1017a3] 537c; CH 9 [1018a4-11] 538d; CH 10 [1018a38-b8] 539b-c; CH 28 [1024b10-16] 546c; BK X, CH 1 [1052a28-37] 578d; CH 3 [1054b33-b2] 581a-b; CH 8-9 585b-586c

9 ARISTOTLE *History of Animals* BK I, CH 1 [486a15-487a1] 7b-d / *Parts of Animals* BK I, CH 1 [639a12-b9] 161b-d; CH 2-4 165d-168c

12 LUCRETIUS *Nature of Things* BK II [1077-1089] 28d

19 AQUINAS *Summa Theologica* PART I, Q 3, A 5 17c-18b; Q 4, A 3 22b-23b; Q 11, A 1, REP 2 46d-47d; Q 15, A 3, REP 4 93b-94a; Q 28, A 1, REP 2 157c-158d; Q 29, A 2, REP 4 163b-164b

Q 30 A 4 ANS and REP 3 170c 171b Q 50 A 2 REP 1 270a 272a Q 57 A 2 REP 2 295d 297a Q 66 A 2 REP 2 345d 347b Q 75 A 3 REP 1 380c 381b Q 76 A 3 REP 4 391a 393a Q 77 A 4 REP 1 403a d Q 79 A 5 RE 3 418c 419b Q 85 A 3 ANS and REP 4 455b-457a A 5 REP 3 457d-458d Q 88 A 2 RE 4 471c 472c Q 93 A 1 REP 3 492a d A 2 ANS 493a d

20 AQUINAS *Summa Theologica* P RT 1 II Q 61 A 1 RE 1 54d 55 PART III SUPPL Q 92 A 1 A S 1025c 1032b

30 BACON *Novum Organum* BK II APH 25 155a d A H 28 158d 159a

35 LOCKE *Human Understa ding* BK III CH III S CT 6-20 255c 260a CH IV SECT 16 263b c

38 ROU SEAU *Inequ lity* 341b 342b

42 KANT *Pu e Reason* 197b 198a

49 DARW N *Orig n of Species* 28b-29a 207a 208a esp 207d / *Descent of Man* 332b-c 347a b

53 JAMES *Psychology* 344b 345b 870a 871a

3 (2) The otherness of species in a genus the d ersity of contraries

8 ARISTOTLE *Physics* BK I CH 5 [188 18-25] 263c CH 6 [189 11 14] 264c [189b23 27] 265b BK IV CH 14 [224 2- 6] 303d 304a c / *Meta physics* BK V CH 10 [1018a25-b7] 539a b BK X CH 4 581d 582d CH 8-9 585b-586c / *Soul* BK I CH 1 [402b1-9] 631c d

9 ARISTOTLE *Hist ry of A imals* BK I CH I [486 5 487 1] 7b d / *Parts of A mals* BK I CH 2 4 165d 168c / *Politics* K IV CH 4 [1290b25 36] 489d-490a

17 PLOTINUS *S xth Enn ad* TR III CH 18 20 291 293a

19 AQUINAS *Summa Theolog ca* PART Q 4 A 3 AN 22b 23b Q II A I RE 2 46d 47d Q 5 A 4 273b-274b Q 75 A 3 R I 380c 381b PART I I Q 23 A ANS 723c 724

20 AQU NAS *Summ Theol gica* PART I II Q 54 A I R P I 22d 23d Q 72 A 7 ANS 117a 118a

35 LOCKE *Hum n Understand g* BK III CH VI CT 39 279 280a

42 KANT *Pur Re son* 197b-198a

49 D RWIN *Or gin of Sp cies* 30d 31b 241d 242

53 JAMES *Psych logy* 344b 345b 387b

3 (3) Ge r c oth rn s o hete ogeneity

8 AR STOTLE *Cat go* CH 4 [b25-2 4] 5d-6a / *Top s* K I H 15 149d 152 pass m H 16 [07b37]-CH 17 [8 4] 152a b / *Phy ics* K VII CH 4 330d 333a esp [49 3 24] 331d 332b / *M t physics* BK I H 3 517a 518a BK V CH 28 [10 4b 0-16] 546c

19 AQU NA *S mm Theol g ca* ART Q 3 A 5 17 18b Q 4 A 3 22b 23b Q 88 A 2 R 4 471c-472

42 KANT *Pure Re son* 197b 198a

3b Relational sameness sameness by analogy or proportional simil tude

7 PLATO *Gorg as* 267c 268a / *T maeus* 448b d

8 ARISTOTLE *Posterior Analytics* BK I CH 10 [76a36-b2] 105a K II CH 14 [98 20-23] 134a CH 17 [99 16] 135b / *Topics* BK I CH 17 [108 6-14] 152b BK IV CH 4 [124 15 20] 172d BK V CH 7 [136b33 137a20] 189a c CH 8 [138b23-27] 191b c / *Physics* BK I CH 7 [191 8-12] 266d BK VII H 4 [249 22 24] 332b / *Generation a d Corruption* BK II CH 6 [333 27-34] 434a / *Meteorology* BK IV CH 9 [387b1 6] 491c / *Metaphysics* BK V CH 6 [016b3 - 1017 3] 537c CH 9 [1018 12 13] 538d BK IX CH 1 [1046 4 8] 570d 571a CH 6 [1048 31 b8] 573d 574a BK XII CH 4-5 599d 601a passim / *Soul* BK III CH 7 [431a20-b1] 663d 664a CH 8 [431b20-432a2] 664b c

9 ARISTOTLE *History of Animals* BK I CH I [486 15-487a1] 7b d BK VIII CH I [588 18-b5] 114b d / *Parts of Animals* BK I CH 4 167d 168c CH 5 [645b1-646 5] 169b d / *Gener t of A imals* BK I CH I [715b 7 26] 255d BK III CH 10 [760 9 17] 301b / *Ethics* BK I CH 6 [096b27-30] 342a BK V CH 3 378c 379b BK VIII CH 7 [1158b29-33] 410d / *Pol tics* BK V CH I [3 1b29-36] 503a / *Rh tori* BK I CH 2 [357b25-1358a2] 597c d BK II CH 20 [1393 22-1394 8] 640d 641d K III CH 4 657b d CH 0-11 662c 666b / *Poeti s* CH 21 [1457b6-33] 693a

11 EUCLID *Elements* BK V 81 98b esp DEFINI TIONS 5-6 81a K VII DEF NITIONS 20 127b

11 NICOMA HUS *A ithmeti* BK II 841c d

16 KEPL R *Harmo ies f the World* 1078b 1080a p im

19 AQUINAS *Summa Theolog ca* PART I Q 4 A 3 22b 23b Q 3 AA 5-6 66b 68c A 10 72c 73c Q 4 A 3 RE 2 77d 78b Q 16 A 6 ANS 98b d Q 44 A 3 ANS 240b 241a Q 66 A 2 ANS 345d 347b Q 93 A I REP 3 492a d PART I II Q 20 A 3 REP 3 713c 714c Q 27 REP - 738 739c

20 AQU NAS *Summa Theol gica* PART I II Q 5 A REP 54d 55c PART I I Q 60 A I and REP 3 847b 848a ART III SUPPL A R 2 885c 886 Q 92 6-7 1025c 1032b

24 RA ELA *Garga tua and Pantagruel* 12d 13b

28 H RV Y *On Anim l Generat* 449a b 469d 470d

30 BACON *No um Orga um* 158d

31 D CARTES *Object ons a*

35 LO KE *Hum U d* XXVI S T 228c

35 HUM *Hum n Un* 8 487b-

42 KANT *Pu Reason* 601d 603a

(3 *The modes of sameness and otherness or diversity.* 3b *Relational sameness: sameness by analogy or proportional similitude.*)

49 DARWIN *Origin of Species* 212d-213c
53 JAMES *Psychology* 549b-550a; 688a-689b passim

3c Sameness in quality, or likeness: variations in degree of the same quality

7 PLATO *Parmenides* 493d-494a
8 ARISTOTLE *Categories*, CH 5 [3^{b}33-4^{a}9] 8a-b; CH 6 [6^{a}27-35] 10d-11a; CH 8 [10^{b}26-11^{a}19] 15d-16b / *Topics*, BK III, CH 5 166b-c / *Physics*, BK IV, CH 9 [217^{a}34-^{b}11] 297b / *Generation and Corruption*, BK II, CH 6 [333^{a}27-34] 434a / *Metaphysics*, BK V, CH 9 [1018^{a}15-19] 538d-539a; CH 15 [1021^{a}8-14] 542b-c; BK X, CH 3 [1054^{b}8-13] 581b
9 ARISTOTLE *History of Animals*, BK I, CH I [486^{a}15-487^{a}1] 7b-d; BK VIII, CH I [588^{a}18-31] 114b-d / *Parts of Animals*, BK I, CH 2 [648^{b}12-649^{b}9] 173a-174a
17 PLOTINUS *First Ennead*, TR II, CH 2 7b / *Fourth Ennead*, TR IX, CH 4 206c-d / *Sixth Ennead*, TR III, CH 15 289a-c
18 AUGUSTINE *City of God*, BK X, CH 10 328b
19 AQUINAS *Summa Theologica*, PART I, Q 4, A 3, ANS 22b-23b; Q 42, A I, REP 1 224b-225d; PART I-II, Q 27, A 3 738c-739c; Q 28, A I, REP 2 740b-741a
20 AQUINAS *Summa Theologica*, PART I-II, Q 52 15d-19c; Q 72, A 7, ANS 117a-118a; PART III SUPPL, Q 69, A I, REP 2 885c-886c; Q 9[?], A I, ANS and REP 7 1025c-1032b
30 BACON *Novum Organum*, BK I, APH 13 145b-148d
31 SPINOZA *Ethics*, PART III, PROP 57, SCHOL 415b
35 LOCKE *Human Understanding*, BK I, CH XXVIII, SEC 1 228c; BK IV, CH II, SECT 11-13 311c-312b
42 KANT *Pure Reason* 73c-74a / *Judgement* 602b-603a esp 602b-d [fn 1]
53 JAMES *Psychology* 319b-322a; 329a-b; 346a-348a; 378b

3d Sameness in quantity or equality: kinds of equality

7 PLATO *Phaedo* 228a-229c / *Parmenides* 494b-c; 500c-502a; 508c-d; 510b-511
8 ARISTOTLE *Categories*, CH 6 [6^{a}27-35] 10d-11a / *Generation and Corruption*, BK I, CH 6 [333^{a}27-34] 434a / *Metaphysics*, BK V, CH 15 [1021^{a}8-14] 542b-c; BK X, CH 3 [1054^{b}1-3] 581b; CH 5 583a-c
9 ARISTOTLE *Ethics*, BK V, CH 3-5 378c-381d
11 EUCLID *Elements*, BK I, COMMON NOTIONS 2a; PROP 4 4a-b; PROP 8 6b-7a; PROP 26 16a-17b
11 NICOMACHUS *Arithmetic*, BK I 821d-822b
16 KEPLER *Harmonies of the World* 1012b-1014b

17 PLOTINUS *Sixth Ennead*, TR III, CH 15 289a-c
19 AQUINAS *Summa Theologica*, PART I, Q 42, A I, ANS and REP 1 224b-225d; Q 47, A 2, REP 2 257b-258c
20 AQUINAS *Summa Theologica*, PART I-II, Q 113, A 9, ANS 368d-369c
35 LOCKE *Human Understanding*, BK IV, CH II, SECT 9-10 311b-c
50 MARX *Capital* 19a-25d esp 19d-20b, 25a-d
53 JAMES *Psychology* 874a-875a

4 Sameness and diversity in the order of knowledge

4a Likeness or sameness between knower and known: knowledge as involving imitation, intentionality, or representation

7 PLATO *Phaedrus* 124c-126c esp 126a-c / *Phaedo* 231b-232b / *Republic*, BK III 333b-d; BK VI-VII 383d-398c esp BK VII 397-398c; BK X 427c-431b / *Theaetetus* 521d-522b; 538d-541a / *Seventh Letter* 809c-810d
8 ARISTOTLE *Interpretation*, CH I [16^{a}4-9] 25a / *Metaphysics*, BK XII, CH 7 [1072^{b}17-24] 602d-603a; CH 9 [1074^{b}36-1075^{a}11] 605c-d / *Soul*, BK I, CH 5 [409^{b}18-411^{a}7] 639c-641a; BK II, CH 5 [416^{b}32-417^{a}2] 647b; [417^{a}17-21] 648c-d; [418^{a}2-6] 648c-d; BK III, CH 2 [425^{b}1, 6] 657d-658a; CH 3 [427^{a}16-^{b}6] 659c-d; CH 4 661b-662c; CH 5 [430^{a}14-16] 662c; [430^{a}20-22] 662d; CH 7 [431^{a}1-8] 663c; CH 8 [431^{b}20-432^{a}2] 664b-c / *Memory and Reminiscence*, CH I [450^{a}25-451^{a}19] 691a-692b
12 LUCRETIUS *Nature of Things*, BK IV [26-109] 44b-45c; [722-817] 53d-54d
17 PLOTINUS *Third Ennead*, TR VIII, CH 6 131; CH 8 132d-133b; CH 9 134a-b / *Fifth Ennead*, TR I, CH 4 210b-c; TR III, CH 1-4 217b-218c; CH 10-13 221b-224b; TR V, CH 1-2 228b-229d; TR IX, CH 7 249b-c / *Sixth Ennead*, TR VI, CH 36-41 339c-342c
18 AUGUSTINE *Confessions*, BK X, par 17 75c-d; par 19 76a-b; par 22-24 76d-77c; par 2[?] 78b-d / *City of God*, BK VIII, CH 6 269b
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31 DESCARTES *Meditations*, III 84a-85a; VI 99a-b / *Objections and Replies* 108b-109d; A 10 131d-132a; 219b-c
31 SPINOZA *Ethics*, PART I, AXIOM 6 355d; PART II, PROP 7 375a-c; PROP 11-13 377b-378c

35 LOCKE *Human Understanding* BK II CH XXX SECT 2 238b c CH XXXI SECT 2 239b d CH XXXII SECT 14-16 245 246b K IV CH IV SECT 11 12 323d 326d
35 BERKELEY *Human Knowledge* S T 1-91 413a-431a esp SECT 2 4 413b-414a SECT 8-9 414 d ECT 25 33 417d 419 SECT 48 49 422a b S CT 56 423c d S CT 86-91 429c 431 S CT 135-142 440a-441c
35 HUME *Human Understanding* SECT XII D V 118 504d
42 KANT *Pure Reason* 7b-d 12c d [fn 1] 15d 16c 23a 24a 34a 35b 55a 56c 88b 91d 99a 101b 101d 102a 115b-c / *Judgement* 550a 551a c
46 HEGEL *Philosophy of Right* PART I I par 146-147 55c 56a
53 JAMES *Psychology* 126b 129a 142 143b 153b 154a 307a 311a esp 307 309a 325b 327 esp 326a b [fn 1] 851b 852a

4b The role of differentiation in definition the diversity of differences

7 PLATO *Phaedrus* 134b d / *Theaetetus* 548c 549d / *Sophist* 551 579d esp 552b 561d / *Statesman* 580a-608d / *Philebus* 610d 613a
8 ARISTOTLE *Topics* BK I CH 5 [101b37 102 17] 144d 145a CH 18 [108 38 b6] 152d BK VI CH 6 196d 199c BK VII CH 3 [153 13 b24] 208b 209 / *Metaphysics* BK III CH 3 [998b21 27] 517c K VII CH 10 1 558a 562
9 ARISTOTLE *Parts of Animals* K I CH 2 4 165d 168c
17 PLOTINUS *Sixth Ennead* TR III CH 8 1 285 286d CH 16-18 289c 291d
19 AQUINAS *Summa Theologica* P RT I Q I A I RE 3 162 163b Q 75 A 3 RE 1 380 381b Q 77 A I REP 7 399 401b A 3 N 401d 403a
20 AQUINAS *Summa Theologica* P RT I I Q 4) 2 R P 3 2b 4a PART I Q 2 A I ANS 710a 711c
30 B C N *Novum Organum* BK II APH 24 154c 155
35 LOCKE *Human Understanding* BK III CH III S CT 256 257a H VI 268b 283a pa m
42 KANT *Pure Reason* 193 200 215d 216c
49 DARWIN *Origin of Species* 28b 29 30d 31b 241d 242a
53 JAMES *Psychology* 344b 345b 669a 671

4c Sameness and diversity in the meaning of words or the significance of terms the univocal and the equivocal

7 PLATO *Euthydemus* 65a 84 / *Sophist* 551a 552 / *Philebus* 609d 610 / *Seventh Letter* 809 810b
8 ARISTOTLE *Categories* CH I 5a b / *Interpretation* H [6 3-8] 25 / *Topics* BK H 18 [1 8 17 37] 152b d K V CH O [48a23-25] 202b [48 38-b4] 202 BK V I CH 3 [58b8-159 2] 215b c / *Sophistical Refutations* I [65 3] 227b 33 [8 b 3] 251d /
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9 ARISTOTLE *Parts of Animals* BK II CH 2 [648b1]-CH 3 [649b22] 172d 174b
10 GALEN *Natural Faculties* BK I CH 2 168c
19 AQUINAS *Summa Theologica* PART I Q I A 10 REP 1 9c 10c Q 3 A 2 REP 1-2 15c 16a A 6 R P I 18 19a Q 13 62b 75b Q 16 A 6 AN 98b d Q 29 A 4 ANS and R P 4 165c 167a Q 32 A I REP 2 175d 178a
20 AQUINAS *Summa Theologica* PART I II Q 61 A I REP I 54d 55c PART III Q 60 A I NS and REP 3 847b 848a
23 HOBBES *Leviathan* PART I 57d 58a
30 BACON *Advancement of Learning* 60b c 65b-c / *Novum Organum* BK I APH 43 109d 110a A II 59-60 112b 113a
31 SPINOZA *Ethics* ART I PROP 17 SCHOL 362 363c PART II PROP 4 SCHOL 1-2 387b 388b
35 LOCKE *Human Understanding* BK I CH IV S CT 5 131a CH XII SECT 18 152a c H XXIX SECT 6-12 234d 236c K III CH S T 28 276a b esp 276b SECT 47-51 282a 283a CH IX 285a 291c CH X S CT 5 292d 293a CH X SE T 3 7 300b 301c K IV CH V SE T 15 343d 344a H VII S T 348b
35 HUME *Human Understanding* S CT V II D V 6 -63 478b d
36 STERNE *Tristram Shandy* 307b 308b
42 KANT *Practical Reason* 315d 316a / *Science of Right* 400d / *Judgement* 547b 548 602b 603a
53 JAMES *Psychology* 332b 334a 549b 550a 689a b 875b 876a
54 FREUD *Interpretation of Dreams* 277d 278a / *General Introduction* 517c 518b

5 The principle of likeness in love and friendship

7 PLATO *Lysis* 19d 21b / *Symposium* 167 c / *Gorgias* 285d 286b / *Statesman* 608b
9 ARISTOTLE *Ethics* K V CH I [1 55 33 b15] 406d-407a CH 3 [56b6 24] 408a b CH 4 [1 56b33 5-a 5] 408c d CH 5 [1157b25-37] 409c d CH 6 [1158 7 2] 410a [1 58 38 b3] 410b H 7-9 410c 412 CH 13 [62 34-b4] 414d-415a BK IX CH 3 418 -419a CH 4 [1 66a29-b2] 419 / *Rhetoric* K I CH 11 [137 b 25] 615a b K H 4 [38 8 9] 626d 627a
12 EPICTETUS *Discourses* K CH 2 167d 170a
18 AUGUSTINE *Confessions* K V P I 22 3 24d 25a

(5 *The principle of likeness in love and friendship*)

19 Aquinas *Summa Theologica* part i q 27 a 4 rep 2 156b d q 30 a 2 rep 2 168a 169b part i ii q 25 a 2 rep 2 731b 732a q 27 a 3 738c 739c q 28 a 1 740b 741a q 32 a 7 763c 764b

20 Aquinas *Summa Theologica* part ii ii q 26 a rep 2 511a d

25 Montaigne *Essays* 83a d 395b 398c passim

30 Bacon *Advancement of Learning* 89a

31 Spinoza *Ethics* part iii prop 31 405d-406a prop 33 406c prop 45 46 410b c prop 52 412b d prop 55 corol demonst and schol 413d-414a part iv prop 29-40 431d 437a

36 Swift *Gulliver* part iv 165b 166a

49 Darwin *Descent of Man* 317c d

51 Tolstoy *War and Peace* bk i 15a b bk vi 242c 243c 270b c bk vii 278c 279b 296a 300c bk viii 311a 313a 314c 316a 326b c 330d 332a bk xii 543b 544b bk xiii 576a b bk xv 616a 617c 631c 633a 640a epilogue i 669d 672a

54 Freud *Narcissism* 404d 406c esp 405a / *Group Psychology* 677c 678b 678d 684a esp 680b 681b d [fn 4] 682c 684a 685b 686a

6 Similitude between God and creatures: the degree and character of the similitude: traces or images of God in creatures

Old Testament *Genesis* 1:26-27 5 1 9 6 / *Job* 12 7-9 / *Psalms* 19 1 75 1 107 23 24—(D) *Psalms* 18 2 74 2 106 23 24

Apocrypha *Wisdom of Solomon* 2 23 13 1 5—(D) OT *Book of Wisdom* 2 23 13 1-5 / *Ecclesiasticus* 17 1 3 42 15 43 33—(D) OT *Ecclesiasticus* 17 1 3 42 15 43 37

New Testament *Romans* 1:20 / *I Corinthians* 11 7 15-49 / *II Corinthians* 3 18 / *Colossians* 3 9-10 / *James* 3 9 / *II Peter* 1 3 4 / *I John* passim esp 2 29 3 7 3 9-10 3 16 3 24 4 7 11 4 16 4 19 / *II John*

16 Kepler *Epitome* bk iv 849a b 853b-854a 860a / *Harmonies of the World* 1038a 1048a 1080b 1085b passim

18 Augustine *Confessions* bk ii par 14 12a b bk iv par 26 25c d par 31 26c 27a bk vi par 4 36a b bk xiii par 32 119a b / *City of God* bk xi ch 25 28 336b 338d bk xii ch 23 357d 358a / *Christian Doctrine* bk i ch 22 629b-630a

19 Aquinas *Summa Theologica* part i q 3 a 1 rep 1-5 14b 15b a 2 rep 1 2 15c 16a a 3 rep 1-2 16a d a 5 rep 2 17c 18b a 7 ans and rep 1 19a c q 4 a 3 22b 23b q 6 a 2 ans and rep 3 28d 29c q 8 a 1 rep 3 34d 35c q 13 aa 2-6 63c 68c q 14 a 2 rep 3 76d 77d a 6 80a 81c q 15 a 2 ans 92a 93b q 18 a 4 107d 108c q 26 a 4 151c-152a c q 27 a 1 ans 153b 154b q 44 aa 3 4 240b 241d q 47 a 1 ans and rep 2 3 256a 257b q 50 a 1 ans 269b 270a q 55 a 3 rep 3 291a d q 57 a 2 ans and rep 2 295d 297a q 59 a 1 contrary 306c 307b q 65 a 2 rep 1 340b 341b q 7 a 1 rep 3 368b 369d q 77 a 2 ans and rep 1 401b-d q 84 a 2 ans and rep 3 442b 443c q 88 a 2 rep 4 471c-472c a 3 rep 3 472c 473a q 91 a 4 rep 1-2 487d 488c q 93 492a 501c q 103 a 4 ans 530d 531b part i ii q 1 a 8 615a-c q 2 a 4 rep 1 618a d a 5 rep 3 618d 619c

20 Aquinas *Summa Theologica* part i ii q 55 a 2 rep 3 27a d q 110 a 4 ans 3 d 351d part iii q 4 a 1 rep 2 730d 731d part iii suppl q 69 a 1 rep 2 885c 886c q 92 a 1 ans and rep 7 1025c 1032b

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31 Descartes *Meditations* iii 88c d iv 90b-91b / *Objections and Replies* 122a b 214a-d 228a c

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For Other considerations of sameness or similarity and of the problem of the reality of kinds or universals *see* FORM 2a IDEA 1a 6b ONE AND MANY 1c UNIVERSAL AND PARTICULAR 2a 2c

Matters relevant to the analysis of essential and accidental sameness specific and generic sameness and otherness in species or in genus *see* EVOLUTION 1b IDEA 4b(3) NATURE 1a(1) ONE AND MANY 3b(1) OPPOSITION 1c( ) RELATION 5a(4) UNIVERSAL AND PARTICULAR 5b

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ADDITIONAL READINGS

Listed below are works not included in *Gr t Book of the Western World* but relevant to the idea and topics with wh h this cl pter deals These wo ks are divided into two gr ps

I Works by auth rs rep esented in this collection

II Works by autho s not represented in this collection.

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Chapter 83 SCIENCE

INTRODUCTION

IN our time science philosophy and religion have come to represent three quite distinct intellectual enterprises Each appeals for allegiance not merely on the ground that it can answer fundamental questions but also because of its contribution to human life and culture In other periods philosophy and religion competed for supremacy though as appears in the chapter on PHILOSOPHY some philosophers and theologians tried to remove this conflict by arguing for the complete compatibility of reason and faith Nevertheless before the 19th century the issue if one existed was between philosophy and religion Science had not yet become sufficiently distinct from philosophy to complicate the picture

When science and philosophy are not themselves sharply distinguished men are not confronted with three separate claims upon their intellectual allegiance Modern science as something quite distinct in method and subject matter from traditional philosophy may actually make its appearance as early as the 17th century But not until Kant are two kinds of science plainly set apart Not until then are they so defined that one becomes identified with what men have al ays called philosophy and the other gradually appropriates the name of science and regards itself as a quite separa e enterprise

Kant differentiates between the empirical and the rational sciences This differentiation tends to correspond with the distinction by otl ers before him of experimental and abstract pl ilosophy It also corresponds with a later d vision into the experimental or inductive and tl e philosophical or deductive sciences But Kant does not seem to contemplate the possibility of conflict between science and philosophy—between the experimental study of nature and metaphysics or what is for him the same between empirical and rational physics

Hume is willing to admit only mathematics to the status of a rational science capable of demonstrating its conclusions with certainty He insists upon experimental reasoning in the study of nature wherein only probable conclusions can be attained But he does not make these critical points in terms of science versus philosophy If the traditional metaphysics is to be rejected it is not because it is philosophy rather than science but because it represents a failure in philosophy *or* science resulting from the wrong method of dealing with matters of fact

In the 19th century however Auguste Comte formulates a doctrine which under the title of *Positive Philosophy* explicitly declares that only the positive sciences—the study of natural mental and social phenomena by empirical methods—deserve to be called sciences in the eulogistic sense of that term In contrast philosophy is mere speculation and religion is superstition The word speculation is for the positivist only slightly less invidious than superstition Whereas superstition implies irrational belief speculation represents a futile attempt by reason to go behind the phenomena in order to discover ultimate causes or substances This cannot result in anything but guesswork or conjecture—never in knowledge or science which are the same for the positivist For all its sho v of logic and system philosophy cannot produce conclusions which have the validity or objectivity of science because it tries to do more than explore and describe the phenomena and because it tries to do whatever it does without investigation or experiment

From many sources in addition to Comte similar views converge to form an attitude generally prevalent in the world today under the name of positivism All its current varieties

seem to have this much in common the identification of science with knowledge of fact and further the restriction of such knowledge to conclusions obtained and verified empirically Whatever does not accord with this conception of science is either like mathematics or logic a purely formal discipline or like philosophy and religion it is conjecture opinion or belief—personal subjective even wishful

IT SEEMS APPROPRIATE that the most recent author in the set of great books should provide us with a declaration of positivism and that he should set science against philosophy and religion It is also fitting that he should be a scientist in the field of psychology since psychology is a late comer among the disciplines which once branches of philosophy now claim to be positive sciences Not only late but last according to Freud for sociology which deals with the behavior of man in society can be nothing other than applied psychology Strictly speaking indeed there are only two sciences—psychology pure and applied and natural science

In his *New Introductory Lectures on Psycho Analysis* Freud concludes with a statement of what he calls the scientific *Weltanschauung* In essence he thinks it asserts that there is no other source of knowledge of the universe but the intellectual manipulation of carefully verified observations in fact what is called research and that no knowledge can be obtained from revelation intuition or inspiration Freud makes the drastic implications of this statement quite explicit It is inadmissible to declare he writes that science is one field of human intellectual activity and that religion and philosophy are others at least as valuable and that science has no business to interfere with the other two that they all have an equal claim *to truth and that everyone is free to* choose whence he shall draw his convictions and in which he shall place his belief

Such an attitude he goes on is considered particularly respectable tolerant broad minded and free from narrow prejudices Unfortunately it is not tenable it shares all the pernicious qualities of an entirely unscientific *Weltanschauung* and in practice comes to much the same thing The bare fact is that truth can not be tolerant and cannot admit compromise or limitations that scientific research looks on the whole field of human activity as its own and must adopt an uncompromisingly critical attitude towards any other power that seeks to usurp any part of its province

As a threat to the dominion of science over man and society religion alone is a really serious enemy Philosophy Freud thinks, has no immediate influence on the great majority of mankind whereas religion is a tremendous force which exerts its power over the strongest emotions of human beings Religion and science might be compatible if religion offering men something incomparably more beautiful more comforting and more ennobling than anything they could ever get from science would only say It is a fact that I cannot give you what men commonly call truth to obtain that you must go to science

But religion cannot say that Freud thinks without losing all influence over the mass of mankind and science cannot on its side yield at all in its claim to being the *only* avenue to truth Employing a method which carefully examines the trustworthiness of the sense perceptions on which it bases its conclusions which provides itself with new perceptions not obtainable by everyday means and which isolates the determinants of these new experiences by purposely varied experimentation science alone can arrive at correspondence with reality It is this correspondence with the real external world we call truth and thus when religion claims that it can take the place of science and that because it is beneficent and ennobling it must therefore be true that claim is in fact an encroachment which in the interests of everyone should be resisted

Philosophy does not seem to Freud to offer men a genuine alternative to scientific truth *Unlike religion it is not in his view necessarily* opposed to science at times it even behaves as if it were a science and to some extent makes use of the same methods But insofar as it parts company with science by clinging to the illusion that it can produce a complete and coherent picture of the universe philosophy must be regarded as an impostor in the halls of knowledge

Th p tu ph losophy tries to construct Freud say mu t ne ds fall to p eces with

every new advance in our knowledge Not it self knowledge but mere opinion or specula tion philosophy does not any more than reli gion offer a substitute for science Both together fall under Freud s interdict Both together would be outcasts from human culture if what he calls our best hope for the future that is the intellect—the scientific spirit rea son—should in time establish a dictatorship over the human mind

WILLIAM JAMES ALMOST contemporary with Freud also draws a sharp line between science and philosophy Writing his *Principles of Psychology* at a time when the experimental methods of the natural sciences especially physiology have just been introduced into the study of mental phenomena he is at pains to define the scope of psychology as a natural sci ence and to separate the questions which can be properly considered by a scientist from those which belong to the philosopher But unlike Freud James does not seem to regard the phi losopher as engaged in a futile effort to solve problems which are either insoluble or better left until science finds means for solving them

For James the distinction between science and philosophy does not seem to lie only in the methods they employ though the empirical or experimental approach does have a bearing on the kind of problems scientists can undertake to solve and the conclusions they can reach The problems and the conclusions are them selves characteristically different from those of the philosopher

The scientist *describes* the phenomena ac cording to James as precisely as possible and as comprehensively but without any implication of finality or totality He recognizes that his de scriptive formulations are tentative and incom plete always subject to the discovery of new data or a more refined presentation of the evi dence Above all he admits that he is only de scribing not *expla n ng*—not laying bare the ultimate real ty wl ich gives the phenomena their deepest intell ibility or ascertaining the causes wl ich show why not merely how things happen as they do

In the I reface to his *Principles* James says that l e has kept close to the point of view of natural science throughout the book This book assuming that thoughts and feelings exist and are vehicles of knowledge thereupon con tends that psychology when she has ascer tained the empirical correlation of the various sorts of thought or feeling with definite condi tions of the brain can go no farther—can go no farther that is as a natural science If she goes farther she becomes metaphysical All attempts to *explain* our phenomenally given thoughts as products of deeper lying entities are meta physical

This scientific point of view James admits is anything but ultimate The data assumed by psychology just like those assumed by physics must sometime be overhauled The effort to overhaul them clearly and thoroughly is metaphysics James does not imply that metaphysics cannot perform her task well but he does think that she spoils two good things when she injects herself into a natural science

Science and metaphysics should be kept quite separate even though the sciences in accumulating a mass of descriptive details, run into queries which only a metaphysics alive to the weight of her task can hope successfully to deal with That will perhaps be centu ries hence and meanwhile the best mark of health that a science can show is this unfinished seeming front

The variance of James conception of meta physics and its future from other traditional views on that subject is discussed in the chapter on METAPHYSICS Here it is relevant to observe that James has a conception of science broad enough to include both the empirical natural sciences and what he calls the pure or *a priori* sciences of Classification Logic and Mathe matics Yet in his view metaphysics does rep resent philosophy as opposed to science be cause it aims at ultimate reality or underlyi g causes For example he rejects the theory of a soul not because he knows it to be false but because he thinks it has no place in a psychol o_gy which contents itself with verifiable laws and which is to remain positivistic and non metaphysical

James seems to embrace the positivist view preval nt in the 19th century and our own day He limits science to as ell as excludes philosophy from the domain of empirical

knowledge In discussing the possibility of free will he says that Psychology will be Psy chology and Science Science as much as ever (as much and no more) in this world whether free will be true in it or not Science however must be constantly reminded that her pur poses are not the only purposes and that the order of uniform causation which she has use for and is therefore right in postulating may be enveloped in a wider order in which she has no claims at all

THOSE MODERN SCIENTISTS and philosophers who do not make a sharp distinction between science and philosophy and who antedate any explicit formulation of the positivist doctrine nevertheless do for the most part conceive natural science as experimental in its method and as having for its goal the formulation of general laws describing and correlating the phenomena They do not all exclude causes from the consideration of the natural scientist nor do they all as stringently as James rule out explanation in favor of description or correla t on Furthermore the almost universal em phasis by modern writers upon the experimen tal character of the natural sciences does not mean a universal identification of science with the experimental disciplines

Mathematics for example is usually re garded as a science in spite of its being non experimental For Locke and Hume as well as for Descartes it exhibits certain characteristics —the self evidence of principles the certainty of demonstrations—which make it more genu inely worthy of the high name of science than are the tentative hypotheses and probable con clusions of experimental physics Other disci plines are called sciences by comparison with mathematics rather than physics Descartes for instance seems to think that metaphys ics can as surely be made a science as mathe-matics can be Locke argues that demonstration from axioms is not limited to the science of quantity As much clarity and certainty is at tainable in reasoning about moral matters Ethics is no less a science than mathematics

Hobbes appears to take a similar view of poli tics though it must be noted in his case that he d ffers from D sca tes and Locke from Bacon Hume and others in not d stinguishing mathe matics from physics with respect to the latter s need for experimental evidence All the sciences are for him alike in being the demonstrations of consequences of one affirmation to another regardless of the diversity of the matter The certain and infallible sign that a man is a sci entist in any field of subject matter is that he can demonstrate the truth thereof perspicu ously to another

Hobbes furthermore seems to think that what is true of geometry is true of every science namely that it must begin with defini tions In geometry he says men begin at settling the signification of their words which settling of significations they call *definitions* Without definitions science is impossible In the right definition of names Hobbes main tains lies the first use of speech which is the acquisition of science and in the wrong or no definitions lies the first abuse from which pro ceed all false or senseless tenets

Freud expresses the opposite view which is generally more characteristic of the attitude of the modern scientist especially the experimen talist or empiricist in method The view is often defended he writes that sciences should be built on clear and sharply defined basal concepts But in actual fact no science not even the most exact begins with such definitions The true beginning of scientific activity Freud holds consists rather in de scribing phenomena and then proceeding to group classify and correlate them Even at the stage of description it is not possible to avoid applying certain abstract ideas to the material in hand ideas derived from various sources and certainly not the fruit of new experience only

They must at first necessarily possess some measure of uncertainty there can be no ques tion of any clear limitation of their content So long as they remain in th s condition we come to an understanding about their meaning by repeated references to the material of ob servation from which we seem to have deduced our abstract ideas but which is in point of fact subject to them

The basic concepts or definit ons of a sc nc are according to Freud in the nature of con ventions although he adds ev rything de-pends on their being chosen n no arb trary manner but dete mined by the important

relations they have to the empirical material

It is only after more searching investigation of the field in question that we are able to formulate with increased clarity the scientific concepts underlying it Then indeed it may be time to immure them in definitions The progress of science however demands a certain elasticity even in these definitions This may not be true of mathematical concepts or definitions but Freud points out the science of physics illustrates the way in which even those basal concepts that are firmly established in the form of definitions are constantly being altered in their content

WITH THE EXCEPTION OF HOBBES the notion that scientific conclusions can be drawn from definitions or can be established without recourse to experiment is not usually extended by modern writers from mathematics and metaphysics to physics As the chapter on PHYSICS shows the basic division of the study of nature into philosophical and scientific physics becomes equivalent in modern times to a separation of the philosophy of nature from the experimental natural sciences We shall return presently to that sense of science in which physics is associated with mathematics and metaphysics as a branch of theoretic philosophy or as one of the speculative sciences All three disciplines are thought of as proceeding in the same way by the demonstration of conclusions from principles obtained by induction from experience—ordinary sense experience that is not the special experiences artificially contrived in a laboratory under experimental conditions But it should be observed that in the modern period even those authors who use science in the foregoing sense when they discuss mathematics and metaphysics treat physics differently They hold that physics must be experimental if it is to be scientific

In proportion as modern physics becomes more and more the model of science the meaning of the word science tends to become reserved for experimental study or at least for empirical investigation so that non experimental disciplines like metaphysics or ethics are questioned when they call themselves sciences Other disciplines try to establish themselves as sciences by imitating physics Marx for example in presenting his own work as economic *science* seeks to explain how it can be scientific even if it is not experimental

The physicist he writes either observes physical phenomena where they occur in their most typical form and most free from disturbing influence or wherever possible he makes experiments under conditions that assure the occurrence of the phenomenon in its normality If experiment in the strict sense is impossible in economics at least the student of economics can be scientific in his effort to observe the phenomena in their most typical form. England Marx thinks offers the most typical example of the capitalist mode of production and the conditions of production and exchange corresponding to that mode Hence for scientific purposes he has used England as the chief illustration in the development of [his] theoretical ideas

THE EXPERIMENTAL CHARACTER of modern physics whether it is called natural science or natural philosophy is discussed in the chapter on PHYSICS The distinction between the construction or use of experiments and the appeal to experience—apart from experiment—either as a source or as a test of scientific formulations, is discussed in the chapter on EXPERIENCE as well as in the chapters on HYPOTHESIS and INDUCTION Here it seems pertinent to note that neither the distinction between induction and deduction nor the distinction between hypotheses and axioms unequivocally marks the line which separates science from philosophy

Aristotle and Bacon for example regard induction as the source of axioms in metaphysics or *philosophia prima* as well as in physics or the philosophy of nature They may have different theories of induction but only insofar as one conceives induction as an intuitive generalization from *ordinary sense-experience* and the other makes induction an inference from *experiments* does the difference between them seem to have a bearing on the distinction between philosophy and science

Similarly the difference between the scientist s and the philosopher s consideration of hypotheses seems to lie not in the role they play in reasoning or argument but rather in their having or not having a special relation to experi

mentation either to guide it or to submit to its test

Experiment then seems to be the distin guishin, mark of science on the side of method and by an extension of meaning even in those subject matters where experiments in the strict sense—in laboratories with apparatus under controlled conditions—are impossible the sci entist differs from the philosopher in an analogous point of method The scientist investigates does research makes observations which go be yond the experiences which ordinary men have in the course of daily life

It seems to be in this spirit that Newton opens the *Optics* with the statement that my design in this book is not to explain the proper ties of light by hypotheses but to propose and prove them by reason and experiments In the same spirit Faraday says of himself As an ex perimentalist I feel bound to let experiment guide me into any train of thought which it may justify being satisfied that experiment like analysis must lead to strict truth if rightly interpreted and believing also that it is in its nature far more suggestive of new trains of thought and new conditions of natural power

Lavoisier imposes upon himself the rule never to form any conclusion which is not an immediate consequence necessarily flowing from observation and experiment Gilbert criticizes those who write about magneti m without recourse to experiments—philosophers who are not themselves investigators and have no first hand acquaintance with things Refer rin, to what has been held by the vulgar and by tradition concerning the motion of the heart and arteries Harvey proposes to separate true from false opinions by dissection multi plied experience and accurate observation

Even a scientist like Fourier who conceives physical theory as a kind of applied mathemat ics says that no considerable progress can here after be made wh ch is not founded on experi ments for mathematical analysis can deduce from general and simple phenomena the expres sion of the laws of nature but the special appli cation of these laws to very compl x effects de mands a long series of exact observations L ke Fourier Galileo also combines mathematics and experiment in the study of nature But though he is willing to introduce exper ments whe e they are necessary in order to test rival hypotheses or alternative mathematical formulations of the laws of motion he seems to express a preference for the rigor of purely mathematical physics

In the Fourth Day of the *Two New Sciences* discussing the parabolic path of projectiles one person in the dialogue Sagredo says that the force of rigid demonstrations such as occur only in mathematics fills me with wonder and de light The understanding thus derived he adds far outweighs the mere information ob tained by the testimony of others or even by repeated experiment Agreeing with this Salviati another person in the dialogue claims that the knowledge of a single fact acquired through a discovery of its causes prepares the mind to understand and ascertain other facts without need of recourse to experiment pre cisely as in the present case where by argumen tation alone the Author proves with certainty that the maximum range occurs when the ele vation is 45 He thus demonstrates what has perhaps never been observed in experience namely that of other shots those which exceed or fall short of 45 by equal amounts have equal ranges

THE CONCEPTION OF SCIENCE as consisting in a rigorous demonstration of conclusions from axi oms—whether in mathematics or other subject matters—seems to be modern as well as ancient It is found in Descartes and Spinoza in Hobbes and Locke as well as in Plato and Aristotle Holding that science in its entirety is true and evident cognition Descartes may add that it has been mathematicians alone who have been able to succeed in making any demonstrations that is to say producing reasons which are evi dent and certain yet he also hopes to make metaphysics a science after the model of mathe matics

This conception of science is somewhat quali fied by Descartes when he discusses the study of nature Here he tends toward experimental ism Here he says that experime its become so much the more necessary the more one is ad vanced in knowledge Referring to pa t ula effects which might b deduced f om th principles in many d ff ent w y he thinks that the only vay to overcome the difficulty of discover ng the princ ples on which the effects

do depend is to try to find experiments of such a nature that their result is not the same if it has to be explained by one of the methods as it would be if explained by the other

On the other hand the conception of science as knowledge founded upon experiment or at least upon extended observation seems to be ancient as well as modern Aristotle criticizes those of his predecessors in physics whose explanation of the observations is not consistent with the observations The test of principles in the knowledge of nature he says is the unimpeachable evidence of the senses as to each fact It is for this reason that he praises the method of Democritus as scientific

Lack of experience Aristotle writes diminishes our power of taking a comprehensive view of the admitted facts Hence those who dwell in intimate association with nature and its phenomena grow more and more able to formulate as the foundations of their theories principles such as to admit of a wide and coherent development while those whom devotion to abstract discussions has rendered unobservant of the facts are too ready to dogmatize on the basis of a few observations The rival treatments of the subject now before us will serve to illustrate how great is the difference between a scientific and a dialectical method of inquiry For whereas the Platonists argue that there must be atomic magnitudes because otherwise The Triangle will be more than one Democritus would appear to have been convinced by arguments appropriate to the subject i e drawn from the science of nature

There are many passages in which Aristotle rejects an astronomical hypothesis because it does not account for the observations or favors one theory against all others because it alone seems to fit the sensible phenomena So too in his biological works he makes experience the test of theories Speaking of the generation of bees for example he says that if we ever learn the truth about this matter credit must be given to observation rather than to theories and to theories only if what they affirm agrees with the observed facts And in his treatise *On the Motion of Animals* he calls for reference to particulars in the world of sense for with these in view we seek general theories and with these we believe that general theories ought to harmonize

But Aristotle also defines science as the certain demonstration of universal and necessary conclusions from self evident principles Scientific knowledge he writes is judgment about things that are universal and necessary and the conclusions of demonstration follow from first principles (for scientific knowledge involves apprehension of a rational ground) The emphasis here is on knowledge of causes and on the certainty and necessity of conclusions which can be demonstrated from axiomatic truths.

By these criteria metaphysics and mathematics are in Aristotle s conception of the three philosophical sciences perfect examples of scientific knowledge physics as a general philosophy of nature is also scientific knowledge in this sense but the particular natural sciences such as astronomy or zoology are more empirical than philosophical in character At least they involve admixtures of demonstration from principles with the verification of hypotheses by observation To the extent that they are empirical they are qualified by an uncertainty and a tentativeness in formulation which do not seem to be present in Aristotle s conception of the purely philosophical sciences

It might even be said that the knowledge of nature which depends on empirical research is not strictly scientific at all Locke appears to say just that How far soever human industry may advance useful and experimental philosophy in physical things he writes scientifical will still be out of our reach Holding that our knowledge of bodies is to be improved only by experience Locke adds I deny not but a man accustomed to rational and regular experiments shall be able to see farther into the nature of bodies and guess righter at their yet unknown properties than one that is a stranger to them but yet as I have said this is but judgment and opinion not knowledge and certainty This way of getting and improving our knowledge in substances only by experience and history makes me suspect that natural philosophy is not capable of being made a science

WHETHER THE EXPERIMENTAL study of nature is the type of all scientific knowledge (in its object its method and the character of its conclusions) or whether according to another conception the philosophical disciplines are the

more perfect perhaps even the only examples of science there seems to be no question that different values attach to these two meanings of science—or as it is currently expressed to science and philosophy

The philosophical sciences may be either theoretic or practical according as they aim at wisdom or at action but they are seldom praised as being useful productively The practical sciences which are also traditionally regarded as branches of moral philosophy—such as ethics politics and economics—may be knowledge put to use in the guidance of individual conduct or the affairs of society but apart from poetics which may direct production in the sphere of the fine arts there does not seem to be any philosophical science or branch of philosophy that provides a mastery of matter or some control over nature None has applications in the sphere of the useful arts

As indicated in the chapters on ART KNOWLEDGE and PHILOSOPHY Bacon appears to take a contrary view Usin the word practical to mean productive rather than moral or civil he divides the philosophy of nature into speculative and practical branches He regards mechanics as the application of physics to useful purposes and finds a productive counterpart to metaphysics in what he calls magic

Nor is Bacon s point merely that the real and legitimate goal of the sciences is the endowment of human life with new inventions and riches in opposition to those whom he criticizes for thinking that the contemplation of truth is more dignified and exalted than any utility or extent of effects In addition he thinks that the truth of science can be tested by its productive utility That which is most useful in practice he writes is most correct in theory

Bacon s position with regard to the productive utility of science would not be contrary to the traditional view if by the philosophy of nature he meant science in the experimental rather than the philosophical sense His emphasis upon experimentation in all parts of the study of nature suggests that that is the case The fact that he places equal emphasis upon machinery and inventions and power over nature also suggests that technology is the other face of any science which is experimental in method

Bacon and Descartes seem to be the first to perceive that knowledge which is experimental in origin must be by its very nature capable of technological applications The instruments and apparatus which Bacon regards as necessary implements of science no less than the machinery and inventions which science can be expected to produce represent the very same techniques of operating upon nature Experimental science is thus seen to be at once the creature and creator of technology As Plato s *Republic* projects a society which cannot be realized unless it is ruled by the science of the philosopher so Bacon s *New Atlantis* prophesies a civilization which the dominance of experimentalism and technology have brought to present reality

OUTLINE OF TOPICS

REFERENCES

To find the passa es cited use the numbers in heavy type which are the volume and page numbers of the passages referred to Fo example in 4 HOM R *Iliad* BK II [265 283] 12d the number 4 is the number of the volume n the set the number 12d indicates that the passage is in s ction d of page 12

PAG SECTIONS Wh n the text is printed in one column the letters a a d b refer to the upper and low r halves of the page For example in 53 J MES *Psychology* 116a 119b the passage begins i th upper half of pa 116 and ends in the lower half of p ge 119 When the text is pr ted in two columns the letters a and b refer to th upper and lower halves of the left hand id of the p ge the letters c and d to the upper and lower halves of the ri ht hand side of the page F r e ample in 7 PLATO *Sympos um* 163b 164c the p sage begins in the lower half of the left hand s de of p ge 163 a d ends in the upp r half of the right hand side of page 164

AUTHOR S DIVI IONS One or more of the main di isions of a work (such as PART BK CH SECT) are somet mes included in the eference line numbers in brackets are given in cer tain ca s *e g Il ad* BK I [265 283] 12d

BIBLE R F ENC S Th referen es are to book chapter and verse When the King James a d Douay v rsions diff r in titl of books or in the numbering of chapters or verses the King J mes ve s on is cited first and the Douay indicat d by a (*D*) f llows *e g* OLD TESTA MENT *Neh m ah* 7 45—(*D*) *II Esdr s* 7 46

SYMBOLS The abb eviat n esp calls the reader s attention to one or more especially rel ant parts f a whol reference passim gnifies that the top c is di cussed intermit tently ather than ont nuously in the work or passage cited

Fo add t nal informat on concerni g the style of the ferences see the Explan tion of Reference Style f r gen ral gu dan e in the use of *The Great Id as* con ult the Pr face

1 Conceptions of sc ence

1*a* Science a a philosoph cal discipline cer t in or perf ct knowledg

7 PLATO *Republ c* K V 370d 373 BK VI 383d 388a K VII 391b 398 / *Sophi t* 570a 574 e p 571a c / *Ph lebus* 633 635a e p 634b 635a

8 AR STOTL *Poster A ly* 97a 137a c esp BK I CH 2 97d 99a / *Phy c* BK I CH I [184 0–16] 259 BK II CH 7 275b d / *Meta phys* K I CH 3 500b 502d BK II CH I 511b d 512b K V CH 2 [10 4b18 7] 523d BK VI CH 547b d 548c BK X CH 7 592b 593a

9 A IST TLE *Eth c* BK VI CH 3 388b c CH 6 389d

18 AUGUSTINE *C ty of G d* K V II CH –9 265b 271

19 AQU NAS *Su nma The l g a* RT Q I AA 1–8 3b 8d pa s m P RT I II Q 14 A I R 2 677b 678a

20 AQU NA *Si mma Theol g a* A T I II Q 54 4 REP 3 25b d Q 57 A 2 36 37b Q 66 A 5 RE 3 79b 80 PART II Q 9 A ANS 424b-425

23 H B *Leviatha* PART 60a d 65c d 71 d 72 d ART V 267 c

31 D S RT *R l s* II 2 5a / *D c i e* PART I 43d P RT I 47 -48a PART IV 51b 52a / *M d tat s* I 75a 77

31 S NOZA *Eth s* PART II RO 40–43 387a 389b PART V ROP 5 8 458d-459b ROP 3 459d 460b

35 LOCK *Hum n U dersta ding* BK IV C III ECT 6 321b c s CT 29 322 323a

35 HUM *Human Understa d ng* SE T IV DIV 20 458a b

42 KANT *Pure R aso* 1 13d 211c 218d 243 250a / *Fu d P in Metaphysic of Mo al* 253b 264b d 270c d / *Practical Re son* 360d 361d / *P f Metaphysi al Element of Eth cs* 365a 366 376c d / *Judgem nt* 463a 467a 560d 561a 603 b

1*a*(1) The ntellectual v rtue of sc nce ts re lat on to underst n I ng nd wisdom

7 PL O *R p ibl* BK VI 386d 388a

9 ARISTOTLE *Eth* BK V C I I–II 387a 393b

20 AQU NAS *S mm Th olog ca* PART I II Q 54 A 4 REP 3 25b d Q 57 A 36a 37b Q 64 A 3 68b 69b Q 66 A 5 79b 80

23 HO ES *Levi th* PART 66 d 68b

31 DE AR E *R l s* 1a 2

31 S INO A *Eth* T P O 4 43 387a 389b P RT V RO 8 458d 459b PROP 3 459d 460b

(*1a Science as a philosophical discipline: certain or perfect knowledge*)

1a(2) The division and hierarchy of the philosophical sciences

1b Science as the discipline of experimental inquiry and the organization of experimental knowledge: the scientific spirit

1b(1) The utility of science: the applications of experimental knowledge in the mastery of nature; machinery and inventions

30 BA ON *Advancement of Learning* 14b 15a 34b 56b / *No um Organum* BK I APH II 107d APH 81 120b c APH 124 133c d APH 129 134d 135d BK I APH 39 169d 170c APH 44-51 175d 194c passim / *New Atlantis* 199a 214d esp 210d 214d

31 DESC RTES *Discourse* PART VI 60d 67a c esp 61b-d 66d 67 c

33 PASCAL *Equilibrium f Liquids* 392b 393a

34 N WTON *Optics* BK I 412a 423b

34 HUYGENS *Light* CH VI 607a b

36 SWIFT *Gulliver* PART III 106a 107a

38 ROUSSEAU *Inequal ty* 363b

39 SMITH *Wealth of Nat ons* BK I 5d 6a BK V 308d 309a c

40 GI BON *Decline and Fall* 661c 663c

41 G BB N *Decl ne and Fall* 291d 292c 509d 510a,c

43 M LL *Representative Government* 346c 347a / *Ut l t ria ism* 452a b

45 LAVOISIER *Elements of Chemistry* PART I 26 27a 41a-44d 45c d

45 F URIER *Theory of Heat* 170a 183b 184a 213b

45 FARADAY *Res arches in Electr city* 390b 433a 440a c

46 H G L *Ph losophy of History* PART II 267a b P RT IV 347d 348a

47 GO THE *Faust* ART II [6835-6860] 167b 168a

49 D RWIN *Origi of Sp cies* 19c d

50 MARX *Capital* 170a c 180d 188c esp 181c 184b 186b-188c 190d [fn] 239c d

50 MARX ENGELS *C mmunist Manifesto* 420d 421a 421d

54 FREUD *Civil at n and Its Discontent* 777a-c 778b 779a 802a c

1b(2) The effects of sc ence on human l fe the economic and social mplicat ons of technology

5 AESCHYLUS *Prometheus Bo d* [44 -506] 44c 45a

5 SO HOCLES *Ant gone* [332 375] 134a b

30 BACON *Novum Orga um* K I A H II 107d APH 81 120b-c APH 124 133c d APH 129 134d 135d BK I APH 49-5 188b 194c

31 DESCARTES *Discou se* ART VI 61b d 66d 67a c

35 LOCKE *Hum n Underst nd ng* BK IV CH XII S T 10- 361b 362c passim

35 HUME *Human U der tand g* ECT D V 5 452d-453b esp 453a b

36 SWIFT *G lliver* PART II 78a b PART III 106a 107

38 MONTESQUIEU *Spirit of Laws* BK XXI 191b-c

38 ROU S AU *I qu lity* 363 366d passim esp 363a b

39 SMITH *W alth of N t n* BK V 308d 309a c

40 GI BON *D cl nd F ll* 633c

41 GI BON *Decl e and Fall* 291d 292 509d 510 c

42 KANT *J dgement* 586a 587a esp 586d 587a

43 CONSTITUTION OF THE U S ARTICLE I SECT 8 [214 217] 13b

43 MILL *Ut litarianism* 452a b

45 FOURIER *Theory of Heat* 170a 172a 174b 175a 184a 213b

46 HEG L *Philosophy of History* PART IV 343d 344a

50 MARX *Capital* 170a c 176d 178d esp 177a 180d 250c esp 180d 181a 181d [fn 3] 186b d 188b c 190d [fn 2] 192d 195c 197a 200 205c 207a 211a 212b 214a 215a 216d 217b 219d 220a 239b 241a 299b 301b esp 299b d

50 MARX ENGELS *Commun st Man festo* 421d 423a

52 DOSTOEVSKY *Brothers Karama ov* K VI 158c 164b d BK XI 311d 312d

53 JAMES *Psychol gy* 866a b [fn]

54 FR UD *Psycho An lyt c Therapy* 127 c / *Civilizat on and Its Discontents* 777a 779a / *New Introductory Lectures* 882d 883a

1c The issue concerning science and philos ophy the di tinction and relation be tween experimental and philosophical science or between empirical and r t onal science

7 PLATO *Republic* BK VII 391b 398c

8 ARISTOTLE *Prior Analytics* BK I CH 30 [46 18-27] 64a / *Heavens* BK II CH 13 [293 15 3] 384d BK III CH 7 [306 18] 397b c / *Generation and Corruption* BK I CH 2 [316a5 14] 411c d

9 ARISTOTLE *Parts of Animals* BK I CH 161a 165d H 5 [644b21-645 37] 168c 169b

28 GILBERT *Loadsto e* PREF 1a b K II 27b c

28 GALIL O *Two New Sciences* THIRD DAY 202d 203a 214d

28 HARVEY *On Animal Generation* 331 337a c

30 BACON *Advancement of Learning* 43a d 48d 49b / *Novum Organum* PR F 105a 106d BK I 107 136a c C P APH 15 108a A H 51 111c APH 63-64 113d 114b APH 66 114d 115c APH 95 126b-c APH 109 128d 129c BK II APH 9 140b c

31 DESCART S *Disc urse* PART I 43d PART VI 60d 67 passim esp 61d 62c / *Obj ct ons and Repl s* 285b d

34 N WTON *Principle* 1a 2a BK I 269 RULE III- V 270b 271b GENERAL CHOL 371b 372a / *Optics* K 542a 543b

35 LO KE *Human Underst d ng* BK IV H III SECT 26 321b c SECT 9 322c 323a CH VI CT 13 335c d CH XI SECT 9- 3 360d 362d esp CT I 361b c

35 HUM *H man U derst nd ng* E T V D V 20-S CT V D V 38 458a 466 p ss m CT X D V 13 32 508d 509d

39 SMITH *We lth f Nat* BK V 336b-

41 GI ON *D l a d F ll* 299

42 KANT *Pu Re* 5 13d p 5 6c 93d 94b 175b [fn] / *Fu d Prin M taphys c f M ls* 253a d 264d 271a c 277d 279d /

(1 *Conceptions of science 1c The issue concern ng science and philosophy the d stin t on and relat on between experimental and ph lo-sophical science or b tween emp ical and rat onal science*)

Practical Reason 331a 332d / *Judgement* 463a 467a 561c 562a c 578a b
45 LAVOISIER *Elements of Chemistry* PREF 1 2d
46 HEGEL *Ph losophy of History* INTRO 182d 183c
51 TOLSTOY *W ar and Peace* BK V 197b EPI LOGUE II 694c d
53 J MES *Psychology* xiiib xiva 89b 90b 882a 886a passim
54 FREUD *Narcissism* 400d / *G eral Introduc t on* 545c d / *I hibit ons Symptoms and Anxiety* 722 b / *New I t oductory Lectu es* 874a 875b

2 The relation of science to other kinds of knowledge

2*a* The relation between science and rel gion the conception of sacred theology as a science

7 PLATO *Republic* BK IV 345d 346a / *Theaete tus* 528c 531a / *Laws* BK XII 797c 798b
8 A ISTOTLE *Heavens* BK II CH 1 [284b1 5] 376a / *Met physics* BK I CH 2 [982b28–983 11] 501a b
12 LUCRETIUS *Natu e of Thi gs* K I [62 158] 1d 3a BK III [1–93] 30a 31b BK V [55–90] 61d 62b
14 PLUT CH *Nicias* 435b d
16 PTOLEMY *Alm gest* BK I 5a 6a
18 AU USTINE *Co fessi s* K V par 3–9 27c 29b / *City of God* BK VIII CI 1 12 264b d 273a BK XI CH 2 323a-c BK XVI I CH 37 493c-494a CH 41 495b-496 / *Chr tian Do tr ne* BK II CH 40 655b 656a CH 42 656c d
19 AQUI S *Summa Theologica* PART I Q 3a 10c Q 2 A 2 REP 1 11d 12c Q 1 AA 12 3 60d 62b Q 14 A 6 R P 2 80 81 Q 19 A 5 REP 2 112d 113c Q 32 A 1 175d 178 Q 39 AA 7–8 209a 213a Q 46 A 2 253a 255a Q 84 A 5 446c-447c
20 AQUIN S *S mma Theol gica* PART I Q 7 A 6 REP 5 110b 111b PART II Q AA 3 4 392d 394b Q 19 A 7 AN 469d-470c Q 45 598c 603c P AA 3 4 600c 601c
23 HO BES *Le athan* PART I 65b-66c 70c 83b P T II 137b c 160b 163a b RT II 165a c P RT IV 260b-c 267a-c 269b 271c 274c d
25 MONT IGNE *Es ays* 89c d 155a-c 208d 209c 212a d 238c 239c 267c 268a 271b 273b
30 B ON *Adv ancement f Learn g* 4c 19d 20a 39d-40c 41b d 55b d 9 d 101 esp 96d 97b / *N vum Org num* BK P 65 114b c APH 9 119d 120 APH 89 124 d
31 DESCARTES *Discourse* PART I 43c / *M dita t ons* 69a 71a c / *Objections and Repl es* 125b-126a 127d 162c 165d 168b 169a 283d 284d
33 PASCAL *Pensées* 77 186a 18 19 205a 210b 19 212a 226 212b 213a 245 253 218b 220a 265 90 221b 225a 543 266a 557–567 272b-273b / *Vacuum* 355b 356b
34 NEWTON *Optics* BK III 543b 544a
35 HUME *Human Understanding* SECT XI DIV 102 497b d SECT XII DIV 132 509c
39 S ITH *W ealth of Nations* BK V 336b 337a
40 GIBBON *Decline and Fall* 12d 13b 159a-d 186a d 200d 201a 204d 205b 307b-309d esp 308b 309b 599c 658b c 670b d
42 KANT *Pure Reason* 177b 192d esp 190 19 d 236b 240b esp 239a b 239d 240a / *Judge ment* 560d 561b 578a b 591b 592c 600d 601c 607d 609b
43 MILL *Utilitarianism* 455a-c
44 BOSWELL *Johnson* 102c d
46 HEGEL *Philosophy of Right* PART III par 2 0 87c d / *Philosophy of History* INTRO 158c 160b 177c d PART III 308c 309d PART IV 361b c 368d 369a c
49 DARWIN *Origin of Species* 239c d / *Descent of Man* 593d
50 MARX *Capital* 305a 306b [fn 2]
51 TOLSTOY *W ar and Peace* BK V 197b BK VI 248d 249a EPILOGUE II 675a 677b esp 676a b 680b c 684b d 695d 696d
52 DOSTOEVSKY *Brothers K arama ov* BK IV 87c d BK VI 158b 159a
53 J MES *Psychology* 847b 848a
54 FREUD *Ne v Introd ctory Lectures* 874a 881c esp 875b d 877d 880d 881c

2*b* The comparison of sc ence with poetry and history

7 PLATO *Lysis* 19d 20a / *Protagoras* 57a-c / *Phaed us* 138c 140d / *Ion* 142a 148a c / *Re pu bl c* BK X 427c-434c
9 ARISTOTLE *Poetics* CH 9 [1451 36–b32] 686a-c
20 AQUINA *Su mma Theologica* PART I II Q 101 A 2 REP 2 267a 268a
23 HO BES *Leviatha* PART I 67b c
25 MONTAIGNE *Essays* 41b 42a 258c 259a
28 HARVEY *Circulat on of the Blood* 316a b
30 B CON *Adva cement of Learning* 32d 38c 39a 44c
31 DESCARTES *Discou se* PART I 43a b
33 P CAL *V acuum* 355a 356b
35 HUM *Human Under ta d g* SECT I DIV 5 452d 453a S CT VIII DIV 65 479b c SECT XII D 132 509c
38 R U E *Inequal ty* 333d 334a 348a c
40 G IB ON *Decl and Fall* 345b 346b
42 K T *J dgem t* 526a 527b 532b c 575b-c
46 HEGEL *Ph l s phy of History* INTRO 157b-158a 182d 183c
51 TOLSTOY *W nd Peace* BK XI 469a-470c BK X II 563a b EPILOGUE II 690a b 694d 696d

53 JAMES *Psychology* 687a 863a
54 FREUD *Interpretation of Dreams* 239c 240a 246b-248c / *C ili ation and Its Disco tents* 796

3 The relat on of science to act on and pro d ction

7 PL TO *Republic* BK V 369c d BK VI 375b 383b pass m BK II 401b
8 ARIST TLE *Topics* BK VI CH 6 [145 12 8] 198d / *M taphy cs* BK VII CH 7 [1032 26-^{b}29] 555b d CH 9 [1034^{a}22 29] 557c BK IX CH 2 571 572a
20 AQUINAS *Summa Theologica* PART I II Q 57 5 REP 3 39a 40
30 BACON *Ad ncem nt of Le rn ng* 65d 66a / *No m O ganum* BK II APH 1-9 137 140c
31 DESCARTES *Dis ourse* PART VI 61b d 66d 67a c
35 HUME *Hum n Under tand ng* ECT I DIV 5 452d-453b
42 K NT *Fu d Prin Metaphysic of M r ls* 266c 267a / *Pract cal Reason* 300d [fn 1] / *Int M t phy c of Morals* 388d 390b d 391a / *J dgement* 463a-464c 523d 524a
43 MILL *Repr entat e Gover m nt* 346 347a
50 MARX *Capital* 170b c 190d [fn 2]

3a The di tinction between theoret c and pr ct cal sc ence th characte of ethics polit cs economics and j isprudence as sciences

7 PLATO *Cl rm des* 7d 8b / *St tesman* 581a 604c 608d
8 AR S TLE *Topi s* BK I CH 14 [05^b 9-29] 149 K VI C 6 [145 12 18] 198d / *H en* BK II CH 7 [306 14 18] 397b / *Metaphys s* BK I CH 2 [982 30-^{b}4] 500 d BK II H I [993^{b}20-23] 512a BK III CH [996 23 36] 514d 515a K IV CH 4 [1008^{b}2 3] 527d 528b BK VI CH I [10 5^{b}19-28] 547d BK X 7 [64 0- 9] 592b c BK X I CH 9 [074^{b}37-1075^{a}2] 605c
9 A ISTOTL *Pa ts of A im ls* BK I CH I [639^b 32-640 0] 162a b / *Eth cs* BK CH I 3 339a 340b CH 7 [98^{a}20-^{b}8] 343c 344 K CI 2 [103^b 6-1104 9] 349b c CH 4 350d 351b K II CH 3 [1112 30-^{b}] 358b BK VI H 2 387d 388b pass m BK X CH 9 [8 ^{b}20-1 81^b 4] 435 436 / *Pol t c* BK IV CH I 487 -488b
16 PTOLEMY *Almag st* BK I 5 6a
18 AU U TINE *C ty of G d* BK V II 4 266d 267 I 8 270a d BK XI CH 5 336b d
19 AQUINAS *S mma Th olog* P RT I Q I A 4 5 b A 5 N 5c 6 Q 4 A 16 90b 91b Q 9 A II 424d-425b Q 84 A 8 ANS 450b 451b P R I Q I A 6 REP 2 614 Q 3 A 5 626b 627a
20 AQU N S *S mma Th log* P R Q 56 A 3 NS 31a 32b Q 57 A 5 R P 3 39 40a Q 94 A 4 ANS 223d 224d T I Q I A I R P 3 772b 773a Q 13 A I REP 3 780a 781b
23 HOBBES *Leviathan* PART I 60c 61a 72a d 78b c 95d 96b P RT I 158c d 164a c
30 BACON *Adva cement of Learning* 16d 17a 40a c 42a c 46c 47c 55b d 65d 66a 81d 82 86b-c / *Novum O g num* BK I APH 3 107b BK II APH 9 140b c
31 D SCARTES *Rules* 1 1a 2a / *Discourse* PART I 44a b PART III 48b 49b PART VI 61b d / *Objections and Replies* 126a b 162d 206c 207a 215a b 237b c 243 d
35 LOCK *Hu U ndersta ding* BK I CH II CT I 103d 104a SECT 4 104d 105a BK III CH XI SECT 15 18 303b 304b BK IV CH III S CT 18 20 317d 319c CH IV SECT 7 10 325b 326b CH XII SECT 8 360c H XXI 394d 395a c
35 HUME *H iman Underst d ng* SECT I D V I 5 451a 453b SECT VIII D V 65 479b-c esp 479c SECT XI DIV 104 498b c SE T XII DIV 131-132 508d 509d p ssim esp DIV 132 509c d
36 SWI T *G lliver* PART II 78a b
38 ROU SEAU *Inequ lity* 329a 334a c
41 GIB ON *Decline and Fall* 75d 80b passim
42 KANT *Pu e Reason* 5a 13d 148c 190c 191a 234c 235a / *Fund Prin M tapl ysic of Morals* 253a 254b 260d 261b 264b d 266a b 271a 283d 284d / *Pr ctical Reaso* 291a 297c 314d 321b 329a 330c 360d 361d / *Pref Met phys l Elements f Eth s* 366d 367c / *Intro M taphys f Morals* 383a d 388a d 390b d 391a / *Science of Right* 397a b 398 399 / *J dgement* 461a 475d esp 463a 467a 474b 475d 578a b 596 598b
43 FEDERA T NU ER 9 47c d NUMB R 31 103c 104a NUMBER 37 119b 120b
43 MILL *Liberty* 283d 284b / *Utilitari sm* 445a 447a p ssim 453c
46 HE L *Philosophy f Right* PREF 5c 6 INTRO par 2-3 9b 12c P RT I par 101 38b 39a ADD T ON I 115a d 19 119c d I 0 136b c
50 MARX *Capit l* 6a 11d passim esp 6 d 8a 9b 10b 11b
51 TO STOY *War and Peace* BK IX 361d 365 I OGUE II 680d 681a 689b
53 J *P y h l gy* 865b 866a
54 FR UD *C il z t a d It D scontent* 800 801b / *New I tr duct ry Lect r s* 883 d

3b The d st nct on betw n pure nd applied nce the rel tion of sc ence to the useful ts

7 PL TO *Lysis* 16c 18b / *Protago as* 43b d / *I* 142a 148 / *G gi* 261a 262 / *R publ* BK VI 392a 398c / *St t sm* 580d 581a 581 582 / *Law* K IV 684c 685
8 AR S OTLE *Posteri r A lyt cs* K I C 9 [6-9] 136c / *T p* K c 6 [145 8] 198d / *M t phy* K I 499 500b K c 7 [3 6 33 4] 555b-556a

(3 *The relation of science to action and production 3b The distinction between pure and applied science the relation of science to the useful arts*)

9 [1034 21 32] 557c BK IX CH 2 571c 572a CH 5 573a c CH 7 [1049 5 12] 574c d BK XII CH 9 [1074b35 1075a2] 605c / *Sense and the Sensible* CH I [436 16–b2] 673b / *Youth Life and Breathing* CH 27 [480b21–31] 726d

9 ARISTOTLE *Ethics* BK I CH I 339a b CH 7 [1098 28 32] 343d BK VI CH 3 4 388b 389a

10 HIPPOCRATES *Ancient Medicine* 1a 9a c esp par 1 4 1a 2c par 14 5a c par 20 22 7b 8d / *Epidemics* BK III SECT III par 16 59b c / *Surgery* par 1 70b / *Articulations* par 58 112d / *The Law* par 4 144d

10 GALEN *Natural Faculties* BK II CH 9 195c 196a

11 NICOMACHUS *Arithmetic* BK I 812d 813a

12 EPICTETUS *Discourses* BK II CH 17 158d 159b

13 VIRGIL *Georgics* 37a 90a passim esp II [475–515] 65a 66a

14 PLUTARCH *Marcellus* 252a 255a

16 COPERNICUS *Revolutions of the Heavenly Spheres* BK I 510b

19 AQUINAS *Summa Theologica* PART I Q 17 A I ANS 100d 101d

20 AQUINAS *Summa Theologica* PART I II Q 57 A 3 ANS and REP I 3 37b 38a A 4 ANS and REP 2 38a 39a A 5 REP 3 39a 40a Q 95 A 2 ANS 227c 228c

23 HOBBES *Leviathan* PART I 73b

25 MONTAIGNE *Essays* 450d 451a 523c 524b

28 GALILEO *Two New Sciences* SECOND DAY 179c d

28 HARVEY *Motion of the Heart* 289d / *Circulation of the Blood* 305a d

29 CERVANTES *Don Quixote* PART I 145c d

30 BACON *Advancement of Learning* 5b 6a 46b-c 48d-49b 50c 51d / *Novum Organum* BK I APH II 107d APH 81 120b-c APH 85 121d 122d APH 129 134d 135d BK II APH 1–9 137a 140c esp APH 4 137d 138b APH 44–52 175d 195d passim / *New Atlantis* 199a 214d esp 210d 214d

31 DESCARTES *Rules* I 1a 2a / *Discourse* PART VI 66a 67 c

34 NEWTON *Principles* 1 b

34 HUYGENS *Light* PREF 551b 552a

35 LOCKE *Human Understanding* BK IV CH XII SECT II 12 361c 362c

35 HUME *Human Understanding* SECT I DIV 5 452d-453b

36 SWIFT *Gulliver* PART II 78a b PART III 97b 98a 106a 112a

39 SMITH *Wealth of Nations* BK I 5b 6a

40 GIBBON *Decline and Fall* 633c 661c 663c

42 KANT *Pure Reason* 60a-c / *Fund Prin Metaphysic of Morals* 266c 267a / *Practical Reason* 300d [fn 1] / *Intro Metaphysic of Morals* 388d / *Judgement* 463a 464c 523d 524b 551a 556a

43 MILL *Representative Government* 369a

45 FOURIER *Theory of Heat* 172b 181a b 184a 213b

46 HEGEL *Philosophy of History* PART I 218d 219a

50 MARX *Capital* 170b c 183b 184a 190d [fn 2] 239c d 299b d

54 FREUD *Psycho Analytic Therapy* 123a 125a / *Civilization and Its Discontents* 777a 778b-d

4 The nature of scientific knowledge

4a The principles of science facts definitions axioms hypotheses

7 PLATO *Meno* 183b-c / *Republic* BK VI 383d 388a BK VII 391b 398c esp 397a 398c

8 ARISTOTLE *Prior Analytics* BK I CH 30 63d 64b esp [46 18–27] 64a / *Posterior Analytics* BK I 97a 122a c esp CH I 3 97a 100a CH 10–11 104d 106b CH 19 22 111c 115b CH 32 120c 121b BK II CH 9 128a b CH 19 136a 137a c / *Topics* BK I CH I [100 25 b21] 143a b CH 2 [101 34 b4] 144a BK VI CH 4 [141 26–142 9] 194c 195c / *Physics* BK VIII CH I [252a20–b] 335d 336b / *Heavens* BK I CH 5 [271b1 18] 362c d BK III CH 7 [306 1 18] 397b-c / *Generation and Corruption* BK I CH 2 [316 5 14] 411c d / *Metaphysics* BK I CH 2 [982 5 b10] 500b d BK II CH 2 [994b16–30] 513a b BK II CH I [995a21]–CH [997a14] 513b d 515c BK IV CH 3 7 524b 532b BK VI CH I [1025b1 1026a6] 547b d 548a BK XI CH I [1059b14 26] 587a CH 4 [1061b17]–CH 7 [1064a28] 589d 592c BK XIII CH 4 [1078b18 30] 610b-c / *Soul* BK I CH I [402 10–403a2] 631b-632a / *Sense and the Sensible* CH I [436a16–b2] 673b / *Youth Life and Breathing* CH 27 [480b21 31] 726d

9 ARISTOTLE *Ethics* BK I CH 7 [1098 35 b8] 343d 344a BK VI CH 3 [1139b25 34] 388c CH 6 389d

11 EUCLID *Elements* BK I DEFINITIONS–COMMON NOTIONS 1a 2a

18 AUGUSTINE *City of God* BK VIII CH 2 10 265b 271d passim

19 AQUINAS *Summa Theologica* PART I Q I A2 ANS and REP I 4a c Q 17 A 3 REP I 2 102d 103c Q 32 A I REP 2 175d 178a Q 36 A 3 REP 4 194c 195d Q 85 A 6 ANS 458d 459c

20 AQUINAS *Summa Theologica* PART I II Q 91 A 2 ANS 221d 223a PART II II Q I A 5 REPS 383b 384b

23 HOBBES *Leviathan* PART I 56b d 58a-61a PART IV 268c d

28 GILBERT *Loadstone* PREF 1b-c

28 GALILEO *Two New Sciences* THIRD DAY 197b d 200a d 207d 208a 236d 237a

28 HARVEY *On Animal Generation* 334c d

30 BACON *Advancement of Learning* 56c 59c / *Novum Organum* BK I APH 63 113d 114

APH 8 -8, 120d 121b APH 103 106 127d 128c APH 121 132b d BK II APH 4 5 137d 139a
31 DESCARTES *Rules* III 4a 5a IV 5c d 6d VIII 13c d IX 15b-c / *Discour e* PART II 47a PART IV-V 51b 54c PART VI 61d 62c 66a b / *M ditations* I 75a 77c III 82a d 83c d IV 89b c V 95b 96a / *Object ons and Repl es* 123a d 125a b POSTULATE I VII 130d 131 162 226d 229c d
31 SPINOZA *Ethics* PART II PROP 40 387a 388b
33 PASCAL *Pensées* I 171a 172a / *Geometri al Demo strat on* 430b-434b passim
34 NEWTON *Pr cipl s* 1a 2a DEFINITIONS LAWS OF M TION 5 24a BK III 269a / *Optics* BK I 379a BK III 541b 542a
34 HUYG NS *Light* CH I 553a CH V 600a 601b
35 LOCKE *Human Understand g* BK III CH XI SECT 15 8 303b 304b BK IV CH VII 337a 344d esp SECT I 337a SECT 10-11 339b-342d CH XII SECT 1-6 358c 360a S CT 12 362b c SECT 15 363a b
35 HUME *Human Underst nd ng* SECT I DIV 2 451b-c
42 KANT *Pure Reason* 68 69c 179d 182b 211c 218d esp 215d 216d / *Practi al Reason* 293c 294b 302d 303b 330d 331a / *Scien e f Right* 457a b
43 F D RALIST NUM BER 31 103c 104a
43 MILL *Ut litarianism* 445a 447a pass m 461c 464d p s im
45 LAVOI IER *Elements of Chem try* PR F 1b-c
45 FOURIER *Theory of He t* 169b 170a 172a
46 HEGEL *Ph losophy of Right* INTRO par 2 9b 10 PART III par 279 93b / *Philosophy of History* INTRO 157b 158a
53 JAMES *Psychol gy* xiiib 862a 864a pass m
54 FREUD *Narci sism* 400d 401a / *In t ncts* 412a b

4b The objects of science the essent l and necessary the sens ble and measurable

7 PLATO *Republ c* K V 370d 373c BK V VII 383d 398c e p K VII 391b 398c / *Ph lebus* 633 635a esp 634b 635
8 AR STOTLE *Prior Analyti s* K I CH 13 [32^b4–23] 48b-d / *P ter r A alyt s* BK CH 4-9 100 104d CH 30-31 119d 120 CH 33 121b 122 C BK II CH I 2 122b d 123 CH 19 136a 137a c / *M t phys s* BK I CH I 2 499a 501c BK I I CH 2 [996 18–997 34] 514d 516 BK VI CH I 2 547b d 549 BK XI CH 8 593a d / *S ul* K C I I [402 10–4 3 2] 631b 632a
9 AR STOTLE *P rts of Animals* K 161a 169d esp CH 5 [644^b2 –645 37] 168c 169b / *Ethics* BK V C I 3 [39 8 25] 388b c K X CH 9 [18 b 3 23] 435b-c
11 NI MA HU *A ithmet* BK I 811a 812a
19 AQU NA *S mm The log* PART Q 57 A 3 NS 297b 298a Q 86 A 4 AN 463d 464d
20 AQUINA *Sum m Th l gic* I I Q 84 A I REP 3 174b 175
23 H BE *Le than* ART I 60a b
28 GALILEO *Two New Sciences* THIRD DAY 202d 203a
30 BACON *Adi ancement of Learn ng* 42a-c 43a-c 45a 46a / *Nov um O ganum* BK I APH 51 111c BK II APH 2 20 137b 153a
31 DESCARTES *Rules* II 2a 3b VI 8d 9a XIV 30d 32a / *D scourse* I ART II 47b d PART V 54c 55a b
31 SPINOZA *Ethics* PART II PROP 37 47 386b 391a
34 N WTON *Principles* 1a 2a BK III RULE III 270b 271a
35 LOCKE *Human U dersta ding* BK III CH VI 268b 283a pass m esp SECT 9 270d 271a BK IV CH II SECT 9 13 311b 312b CH III SECT 29 322c 323a CH VI SECT 13 335 d
35 BERKELEY *Human Kno ledge* SECT 106 433c d
35 HUM E *Human Understa ding* SECT IV DIV 20 21 458a-c SECT XII D V 131–132 508d 509d
42 KANT *Pure Reason* 46d-47c / *Int o Meta physic of Morals* 387a d / *Judgement* 550a 551a c 562d 563b 564a-c 581a 582c 603d 604b
45 LAVOISI R *Elements of Chem stry* PR F 1b
45 FOURIER *Theory of Heat* 169a 177a 183a 184a
45 FARADAY *Researches in Elect icity* 851b c
49 DARWIN *Orig f Spe ies* 239c
53 JAM S *Psy h logy* 89b-90b 647b 648b 876a b 882a 884b
54 FREUD *New I troductory Lectures* 874a b 879c d

4c The role of cau e in science expl nat on and de c iption as ms of scient fic nquiry

7 PLATO *Men* 188b 189a / *Phaedo* 240d 246 / *Republ c* BK VI VII 383d 398c / *Tim eus* 455a b
8 ARISTOTLE *Posterior A alyt s* 97a 137a c pas sim e p BK I CH 1– 122b d 123c CH 9 128a b CH II 128d 129d CH 16– 8 134b 136a / *Physics* BK II CH 3 [194^b16–23] 271a b CH 7 [198^a22 24] 275b K IV H 4 [211 6–11] 290a / *Metaphys s* BK I CH I [981^b24–982] 499 500b H 2 [982 28 3] 500c BK I CH 2 [994^b16–31] 513a b BK II CH 2 [996 8–$^b26$] 514d 515b K VI H I [5^b 18] 547b d K VII CH 7 565a 566a c K VIII CH 4 568d 569b K XI CH 7 [1 63^b36–1064 9] 592b
9 AR OTI *Part of An m ls* K CH I [639^b10–642^b4] 161d 165d esp [64 1–30] 165a c / *Gait f A mal* CH 243 b / *Generat n of A imals* BK I CH I [7 5 8] 255 b K IV CH I [765 35–$^b5$] 306c BK V C I [778 5 0] 320d / *Eth* BK CH 7 [98 35–$^b8$] 343d 344a
10 G LEN *Nat ral Facult s* K CH 4 169a
12 LU TIU *Nat f Th g* BK V [509–533] 67d 68 BK I [7 3 7] 89 d

(4 *The nature of scientific knowledge 4c The role of cause in science: explanation and description as aims of scientific inquiry.*)

16 COPERNICUS *Revolutions of the Heavenly Spheres* 505a 506a

16 KEPLER *Epitome* BK IV 958b 960a

19 AQUINAS *Summa Theologica* PART I Q 19 A 5 ANS and REP 2 112d 113c Q 32 A 1 REP 2 175d 178a Q 57 A 3 ANS 297b 298a Q 86 A 4 ANS 463d-464d

20 AQUINAS *Summa Theologica* PART II II Q 9 A 2 ANS 424b-425a

23 HOBBES *Leviathan* PART I 60a b PART IV 267a-c

28 GILBERT *Loadstone* BK I 5a 7a passim BK II 27b-c

28 GALILEO *Two New Sciences* THIRD DAY 202a 203a FOURTH DAY 252a b

28 HARVEY *Circulation of the Blood* 319c / *On Animal Generation* 335 336c 393b c 425a

30 BACON *Advancement of Learning* 42a c 43a c 45a-46a 46c-47c / *Novum Organum* BK I APH 48 110d 111a APH 99 127b-c APH 121 132b d BK II APH 2 3 137b d / *New Atlantis* 210d

31 DESCARTES *Rules* IX 15b d / *Discourse* PART VI 61d 62c 66a b / *Meditations* III 84a 87a IV 90a b / *Objections and Replies* AXIOM I 131d 158b 162a 215a b

31 SPINOZA *Ethics* PART I AXIOM 4 355d PROP 8 SCHOL 2 356d 357d APPENDIX 369b 372d PART IV PREF 422b d-424a

34 NEWTON *Principles* 1b 2a DEF VIII 7b 8a BK III RULE I II 270a GENERAL SCHOL, 371b-372a / *Optics* BK III 541b 542a 543a 544a

34 HUYGENS *Light* CH I 553a b

35 LOCKE *Human Understanding* BK IV CH III SECT 9-17 315c 317c SECT 28 29 322a 323a CH VI SECT 5 15 332b 336d passim

35 BERKELEY *Human Knowledge* SECT 29 33 418c-419a esp SECT 32 418d-419 SECT 50-53 422c-423a passim SECT 60-66 424b-426a esp SECT 65-66 425d-426a SECT 1 2 109 432d 434b

35 HUME *Human Understanding* SECT I DIV 9 454c-455a SECT IV DIV 21 22 458b-459a DIV 26 460b-c SECT VII DIV 57 475d-476b [fn 2] DIV 60 477a SECT VIII DIV 67 480c 481 DIV 70 481d-482a SECT IX DIV 82 487b-c SECT XII DIV 132 509a d esp 509b-c

39 SMITH *Wealth of Nations* BK V 335b-336d

42 KANT *Pure Reason* 46d-47c / *Fund Prin Metaphysic of Morals* 285c 286a / *Practical Reason* 311d 314d / *Judgement* 557c 558b 564a c 581a 582c

45 LAVOISIER *Elements of Chemistry* PART I 9d 10b

45 FOURIER *Theory of Heat* 169a 183a 184a

45 FARADAY *Researches in Electricity* 298d 440b d

46 HEGEL *Philosophy of History* INTRO 157b 158a

49 DARWIN *Origin of Species* 239c 240d

51 TOLSTOY *War and Peace* BK IX 344a b BK XI 470a c BK XIII 563a b EPILOGUE I 650b c EPILOGUE II 694d 696d

53 JAMES *Psychology* 69b 70a 89b 90b 324b 742a b 745b 824b 825a 882a 884b passim 885b 886a

54 FREUD *Instincts* 412a / *General Introduction* 454b c 484a

4d The generality of scientific formulations: universal laws of nature

7 PLATO *Republic* BK VI 386d 388a BK VII 391b 398c

8 ARISTOTLE *Posterior Analytics* BK I CH 4-5 100a 102b CH 11 [77a5-9] 105d 106a CH 13 14 107c 109a CH 24 116b 118a CH 31 120a-c BK II CH 19 136a 137a c / *Metaphysics* BK I CH 2 [982a21 25] 500c BK VI CH 1 [1026a23 33] 548b c BK VII CH 15 563c 564c BK XI CH 7 [1064b6-13] 592d 593a

9 ARISTOTLE *Ethics* BK X CH 9 [1180b13 23] 435b c / *Rhetoric* BK I CH 2 [1356b28 35] 596b c

19 AQUINAS *Summa Theologica* PART I Q 84 A 1 ANS 440d-442a

28 GALILEO *Two New Sciences* THIRD DAY 197a b 200a b 202d 203a FOURTH DAY 238a

28 HARVEY *On Animal Generation* 332a 334d esp 334c d

30 BACON *Advancement of Learning* 98c / *Novum Organum* BK I APH 17 25 108a d APH 103 106 127d 128c APH 130 135d 136a c BK II APH 5 138b 139a APH 33 161b d

31 DESCARTES *Discourse* PART I 47c d PART V 54c 55b / *Objections and Replies* 167c d

31 SPINOZA *Ethics* PART III 395a d

33 PASCAL *Vacuum* 358a b

34 NEWTON *Principles* 1a 2a BK III RULES 270a 271b PROP 7 281b 282b GENERAL SCHOL, 371b-372a / *Optics* BK III 541b-542a 543a b

34 HUYGENS *Light* PREF 551b 552a

35 LOCKE *Human Understanding* BK IV CH I SECT 9 308d 309b CH III SECT 14 316b d SECT 28 29 322a 323a SECT 31 323c d CH VI SECT 4 16 331d 336d passim CH XII SECT 7 13 360b 362d passim

35 BERKELEY *Human Knowledge* INTRO SECT 12 408a b SECT 15 16 409a d SECT 62-66 425a-426a SECT 103 109 433a-434b passim SECT 126-128 438b d

35 HUME *Human Understanding* SECT I DIV 9 454c-455a SECT IV DIV 26 460b c SECT XII DIV 132 509c

42 KANT *Pure Reason* 195d 200 esp 197b 198a 211c 218d / *Judgement* 562d 563b 564a-c 581a 582c

45 FOURIER *Theory of Heat* 169 b 173b 175b 177a 184a

(5 *Scientific method* 5a *The role of experience observation and experiment*)

19 Aquinas *Summa Theologica* part i q 84 a 4 ans 444d-446b
21 Dante *Divine Comedy* paradise ii [46-105] 108b-d
23 Hobbes *Leviathan* part i 60a d part ii 129a b part iv 267a b
25 Montaigne *Essays* 285c 286a 377a d 516b-c
28 Gilbert *Loadstone* pref 1a b bk i 6a 7a bk ii 27b-c bk iv 85b-c
28 Galileo *Two New Sciences* first day 131a 138b passim third day 203d 205b 207d 208c
28 Harvey *Motion of the Heart* 267b d 274b esp 268c d 273c 28 c d 286b 304a c esp 286b-c 295d 296a / *Circulation of the Blood* 320b 322d 323d 324c d / *On Animal Generation* 331b 335c 411c d 451b d 473a
30 Bacon *Advancement of Learning* 16a 42a-c 43d-44c / *Novum Organum* 105a 195d esp bk i aph 8 107c d aph 19 108b aph 22 108c aph 50 111b aph 54 111c d aph 70 116b 117a aph 82-83 120d 121b aph 95 1 3 126b 128a aph 121 132b d bk ii aph 10-15 140c 149a aph 36 164a 168d aph 38 43 169c 175c / *New Atlantis* 210d 214d
31 Descartes *Rules* ii 2d 3a viii 12b 13a xii 22c 23a xiv 28a b / *Discourse* part i 44a-c part ii 50b 51a part v 56a 59d part vi 60d 67a c / *Meditations* i 75a 77c
33 Pascal *Vacuum* 355a 358b / *Weight of Air* 429a
34 Newton *Principles* bk iii rule iii v 270b 271b / *Optics* bk i 379a bk i i 543a b
34 Huygens *Light* ch i 553a
35 Locke *Human Understanding* bk iv c i i i sect 14 316b d sect 16 317a-c sect 25 29 321a 323a passim ch xii sect 9-14 360d 363a
35 Berkeley *Human Knowledge* sect 3 418c sect 58-59 424 b sect 104 433 b sect 107 434a
35 Hume *Human Understanding* sect iv div 23 27 459a-460d sect vi div 48 471b sect iii div 65 479b-c sect xi div 32 509a d
38 Rousseau *Inequality* 329d 330b
42 Kant *Pure Reason* 5c 6c 185a c 227b / *Fund Prin Metaphysic of Morals* 253a-c 254b-c 263b-c / *Practical Reason* 329d 330c / *Judgement* 562d 563b
43 Mill *Utilitarianism* 446a 461c-464d passim esp 463c d
45 Lavoisier *Elements of Chemistry* pref 1c 2b 6d 7a c part i 23c part i 87b-c
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Chapter 84 SENSE

INTRODUCTION

THE nature of sensation seems at first to be as obvious as its existence In the tradition of the great books there may be controversy concerning the existence of sense in plants as well as in animals and there may be controversy over the existence in man of faculties higher than sense But no one disputes that men and other animals are endowed with a power of sense

The extent of this power may be questioned but not the fact that animals and men when awake experience sensations or perceive through their senses Sleep according to Aristotle can occur only in those living things which have the power of sense perception If there be an animal not endowed with sense perception it is impossible that this should either sleep or wake since both these are affections of the activity of the primary faculty of sense perception

The existence of the sensible—of an external something which causes sensation and can be sensed—also seems to escape denial or dispute The existence of a purely intelligible reality—of a world of immaterial things incapable of being sensed—is subject to debate in all periods of western thought The sensible world is sometimes regarded as the only reality sometimes it is regarded as mere seeming or appearance in comparison with the reality of purely intelligible being Men may also differ on the question whether things possess sensible qualities when they are not being sensed But with few exceptions notably Berkeley and Hume the existence of a sensible world of material things is not denied or seriously doubted

The controversies and issues indicated above are for the most part discussed elsewhere The chapter on ANIMAL considers the sensitivity of plants. There also as well as in the chapters on MAN IDEA and MIND is considered the distinction between the senses and the higher faculties of reason or intellect The chapter on MEMORY AND IMAGINATION deals with these two functions in their relation to sense and sense perception and the contrast between sensible and intelligible reality is discussed in the chapters on BEING FORM IDEA and MATTER Some of these topics necessarily recur here especially as they bear on what for this chapter are the primary problems—the nature of sensation the analysis of the power of sense and the character of the knowledge which is afforded by the senses

AS WE HAVE ALREADY observed no difficulty seems to arise at first concerning the nature of sensation It is supposed by many inquirers early and late in the tradition that matter is sensitive as well as sensible Animals have sense organs which react to physical stimulation Bodies either act directly upon the sense organs as in the case of touch and taste or as in the case of vision hearing and smell they exert their influence through an intervening medium yet in a manner which seems to be no less the action and reaction of bodies

Those who distinguish between living organisms and inanimate bodies tend to regard sensitivity as a property of living matter but it does not follow for all who make this distinction that other than material factors are needed to explain sensation On the contrary some writers seem to think that the motions of matter account for sensation as readily as the laws of mechanics account for all the sensible changes we are able to perceive

Lucretius for example holds that living things consist of body and soul and that the soul (or mind) differs from the body only in the size the fineness of texture and the mobility of the material particles which compose it It

is he says by the common motions of the two —body and soul—that sensation is kin dled and fanned throughout our flesh Sensa tion occurs when the particles of body and soul together are set in motion by the impact of external bodies upon the organs of sense When the pupil of the eye receives in itself a certain kind of blow it is said to perceive white color and another again when it perceives black Similarly every kind of sound and voice is heard when they have found their way into the ears and struck upon the sense with their body for that voice too and sound are bodily you must grant since they can strike on the senses

Either the external body itself as in touch strikes the sense and sets up those bodily mo- tions in the animal which are sensation or ac cord ng to Lucretius minute replicas or images —composed of atoms as all things are—fly off from the surface of distant bodies and enter through the pores of our sense organs to awaken in us vision hearing or smell In either case sensation is a bodily reaction and for Lucretius imag nation and memory even thought are consequent motions in the atoms of the mind —further bodily reverberations as it were of sensat on

The cause of sense writes Hobbes is the external body or object which presses the organ proper to each sense either immediately as in taste and touch or mediately as in seeing hearin, and smellin which pressure by the mediat on of ne ves and other strings and membranes of the body continues inwards to the brain and heart causes there a resistance or counter pressure or endeavor of the heart to deliver itself which endeavor because outward seems to be some matter without And this *s em ng* or *fancy* is that wh ch men call *sense*

The object seems to be colored or hot or sweet when it causes certain sensat ons in us which are projected outward upon it in re sponse or counter action to the nward motions it sets up But says Hobbes these sensible quali ties are in the object nothing but so many several motions of the matter by whi h it presses our organs d versely Neither in us that are pressed are they anything else but diverse motions (for mot on produces noth ng but motion)

THE FOREGOING THEORY reducing sensation to bodily motion seems to draw its cogency from the fact that only bodies are sensible that sense organs are bodily parts and that sense organs must be activated by some sort of physi cal contact for sensations to occur Some writers like Descartes accept the theory for animals but reject it for men or they distin guish in the case of men between thought and sensation They regard sensation with its sub sidiary functions of memory and imagination as reducible to corporeal motions but refuse to grant that external sense-impressions or in terior fancy can produce knowledge without the activity of an immaterial soul

To animals Descartes declares we can ascribe no knowledge at all but only fancy of a purely corporeal kind In contrast that power by which we are said to know things is purely spiritual and not less distinct from every part of the body than blood from bone or hand from eye In men as well as animals the ex ternal senses in so far as they are part of the body perceive in virtue of passivity alone just in the way that wax receives an impression from a seal Fancy or imagination is also a genuine part of the body and memory at least that which is corporeal and similar to that of the brutes is in no respect distinct from imagination

These corporeal faculties are according to Descartes of use to the understanding or the mind only when it proposes to examine some thing that can be referred to the body but if it deal with matters in which there is nothing corporeal or similar to the corporeal it cannot be helped by those faculties Hence for Des cartes the mind can act independently of the brain for certa nly the brain can be of no use in pure thought its only use is for imag ning and perceiving

For others like William James the distinc tio i between sensation and thought so far as their relation to matter is concerned seems qu te untenable He objects to those who look upon sensational consc ousness as something *quasi* material hardly cognitive wh h on need not much wonder about wh le th y re gard rat onal con iou ness as qu t the re verse and th mystery of it [a] un peakable We can correlate consc ousness w th the brain s

workings only in an empirical fashion James thinks and we ought to confess that no glimmer of explanation of it is yet in sight That brains should give rise to a knowing consciousness at all this is the one mystery which returns no matter of what sort the consciousness or of what sort the knowledge may be Sensations aware of mere qualities involve the mystery as much as thoughts aware of complex systems involve it

Still others like Plotinus and Aristotle think that the mystery of conscious matter is not essentially different from the mystery of living matter for if there is anything mysterious about nutrition and growth or sensation and imagination it consists in the same thing—the union of material and immaterial principles of body and soul

If the soul were a corporeal entity Plotinus writes there could be no sense-perception no mental act no knowledge If the sentient be a material entity (as we are invited to believe) sensation could only be of the order of seal impressions struck by a ring on wax Perception is not a passively received impression It is according to Plotinus an act of awareness determined by the nature and character of the living being in which it occurs In any perception we attain by sight the object is grasped there where it lies in the direct line of vision The mind looks outward this is ample proof that it has taken and takes no inner imprint and does not see in virtue of some mark made upon it like that of the ring on the wax it need not look outward at all if even as it looked it already held the image of the object seeing by virtue of an impress on made upon itself

According to Aristotle two characteristic marks have above all others been recognized as distinguishing that which has soul in it from that which has not—self movement and sensation By self movement he appears to mean such things as the nutrition and growth which is found in plants, as well as the additional animal faculty of local motion Both self movement and sensation require soul as well as body Nothing grows or decays naturally he writes except what feeds itself and nothing feeds itself except what has a share of soul in it So too nothing except what has soul in it is capable of sensation But the exercise of sense-perception does not belong to soul or body exclusively Sensation is not an affection of the soul by itself nor has a soulless body the potentiality of perception

But Aristotle asks are all affections of the soul affections of the complex of body and soul or is there any one among them peculiar to the soul by itself? If we consider the majority of them there seems to be no case in which the soul can act or be acted upon without involving the body *e g* anger courage appetite and sensation generally Thinking seems to be the most probable exception but if this too proves to be a form of imagination or to be impossible without imagination it too requires a body as a condition of its existence

Aquinas tries to answer the question Aristotle asks with a threefold distinction which places sensation and imagination midway between the vegetative functions and rational thought The power of thought or the intellectual power Aquinas says does not belong to a corporeal organ as the power of seeing is the act of the eye for understanding is an act which cannot be performed by a corporeal organ like the act of seeing

At the other extreme from this operation of the soul which so far exceeds the corporeal nature that it is not even performed by any corporeal organ are those operations of the soul performed by a corporeal organ and by virtue of a corporeal quality Because it is a kind of self movement digestion requires soul as well as body but it is a corporeal action in the way in which according to Aquinas it involves the action of heat Between these extremes, Aquinas places sensation and imagination operations performed through a corporeal organ but not through a corporeal quality

He explains this further by means of a distinction between natural and spiritual immutation—physical and psychic change Natural immutation takes place by the form of the thing which causes the immutation being received according to its natural existence into the thing in which the immutation is effected as heat is received into the heated thing Vegetative activities while remaining psychic in the sense of occurring only in living or be-

souled matter involve only natural immutations in the vital organs involved

In contrast spiritual immutation takes place by the form of the thing causing the immutation being received according to a spiritual mode of existence into the thing in which the immutation is effected as the form of color is received into the eye which does not thereby become colored Though some sensations may require a natural immutation of the sense organ as hot and cold do all sensations necessarily involve a spiritual immutation which enables the sense-organ to perform its proper act of knowing as the eye knows color without becoming colored Otherwise Aquinas says if a natural immutation alone sufficed for the sense s action all natural bodies would feel when they undergo alteration

THESE DIVERSE VIEWS of the nature of sensation seem to be paralleled by diverse views of the sensitive faculty That the function of the senses is somehow to apprehend or know does not seem to be disputed But whether the senses—including memory and imagination—are the only faculty of knowing is an issue to which the great books seem to give a variety of answers

The opposite answers appear to be correlated not only with conflicting positions in respect to body and soul but also with opposing theories of the distinction between men and other animals Those who hold that the motions of matter are adequate to explain the phenomena of knowing and thinking tend to make sense perception the primary function of the mind and to treat not only memory and imagination but also reasoning or thought as subsequent activities of the same general faculty which receives impress ons from external sources in the first instance Since other animals possess senses and give evidence that perception in the n has consequences for memory and imag inat on tho e who hold this view also tend to attribute thought to animals and to regard man as d ffering from them only in degree

Those who take the contrary view that knowing involves an immaterial principle or cause—a soul as well as a body—tend to distinguish the various functions of sense from the activities of thought—such as conception judgment and reasoning They also take the position that man while sharing sense perception memory and imagination with other animals alone possesses the higher faculty The difference between men and brutes is thus conceived as one of kind not of degree when the difference between the senses and the reason in man is also conceived as a difference in kind A functional relationship between sensation and thought is not thereby denied but a distinct faculty is affirmed to be necessary for going beyond the apprehen ion of particulars to knowledge of the universal or for rising above the imagination to abstract thought

The distinction between sense and reason as faculties of knowing is sometimes stated in terms of a difference in their objects—the particular versus the universal becoming versus being the material versus the immaterial Sometimes it is stated in terms of the difference between a corporeal power requiring a bodily organ and a spiritual power which belongs exclusively to the soul Sometimes it is stated in terms of the contrast between sense as intuitive and reason as discursive the one beholding its objects immediately the other forming concepts judgments or conclusions about objects which are either beheld by the senses or cannot be intuitively apprehended at all

The exceptions to the foregoing summary are almost as numerous as the exemplifications of the points mentioned Nothing less than this intricate pattern of agreements and differences will serve however to represent the complexity of the discussion and the way in which diverse theories of sense imply different views of nature and man of mind and knowledge The situation can be illustrated by taking certain doctrines which seem to be opposite on most points and then considering other theor es which seem to agree on this point or that with both extremes

WE HAVE ALREADY observed the opposition between Hobbes and Aquinas with regard to matter and spirit in relation to the activity of the senses Hobbes like Lucretius not only treat all mental pheno nena as manifestations of bodily motion but also reduces thought to the train or sequ nce of images Images are in turn reducible to the sensations from which they derive.

As we have no imagination Hobbes writes whereof we have not formerly had sense in whole or in parts so we have no transition from one imagination to another whereof we *never had the like before in our senses* Using the word thoughts to stand for the images derived from sense Hobbes goes on to say that besides sense and thoughts and the train of thoughts the mind of man has no other motion though by the help of speech and method the same faculties may be improved to such a height as to distinguish men from all other living creatures

Only man s use of words makes the difference in the exercise of the imagination that we generally call understanding and which according to Hobbes is common to man and beast Similarly it is only the fact that common names have general significance which gives human discourse the appearance of abstract thought for Hobbes denies abstract ideas Thoughts or images are no less particular than sensations there being nothing in the world universal but names

Berkeley and Hume seem to agree with Hobbes that man has no abstract ideas or universal concepts that all the operations of thought are merely elaborations of the original impressions of sense and that no special power but only the use of language distinguishes men from other animals

Berkeley uses the word idea to stand for sense impressions— ideas actually imprinted on the senses —and for whatever is perceived by attending to the passions and operations of the mind To these two he adds a third ideas formed by the help of memory and imagination either compounding or dividing or barely representing those originally perceived in the aforesaid ways. The only difference between the first and the third is that the ideas of sense are more strong lively and distinct than those of the imagination But our ideas of sense and imagination do not cover all the objects of which we can think He admits therefore the possibility of our having *notions* whereby we understand the meaning of a word like spirit or soul which refers to a substance of which we can form no idea

Hume divides all the perceptions of the mind into two classes or species which are distinguished by their different degrees of force and vivacity The less forcible and lively are commonly denominated *thoughts* or *ideas* The other he calls impressions meaning thereby *all our more lively perceptions* Impressions are the source of all other ideas the creative power of the mind consisting in no more than the faculty of compounding transposing augmenting or diminishing the materials afforded us by the senses and every simple idea bein copied from a similar impression

Yet though Berkeley and Hume seem to agree with Hobbes in reducing all thought to primary sense perceptions and derived memories or imaginations Hume does not attempt to explain thought by the motions of matter Berkeley differs even more radically He denies that matter or bodies exist and so he regards sense perception like all the rest of thought as purely spiritual The soul passively receives its original impressions directly from God and actively forms the ideas it is able to derive from these impressions.

Nor do all those who somehow conceive man as composed of both body and soul agree upon the function of sense in relation to the rest of thought Locke for example uses understanding to cover all sorts of mental activity Mental activity begins with the passive reception of the simple ideas of sense—the impressions produced in us when the bodies that surround us do diversely affect our organs —and the simple ideas of reflection which arise from an awareness of our own mental operations But mental activity also includes the formation of complex ideas by the compounding of simple ones and even the act whereby we form abstract ideas in doing which man in Locke s opinion is distinguished from brutes

All these activities require soul as well as body All are somehow nothing more than a reworking of the original sensations passively received In this last respect Locke s view accords with that of Hobbes Berkeley and Hume though he differs from them with respect to abstract ideas and in his theory of body and soul On the very point which he holds in common with Hobbes Berkeley and Hume Locke seems to disagree with Descartes.

Thinking for Descartes is the activity of a

purely spiritual substance—the rational soul—peculiar to the dual nature of man whereas sensation and imagination common to men and brutes are purely corporeal functions In man the soul or thinking substance may form certain of its ideas those relative to bodies under the influence of sense or fancy but with regard to other ideas such as those we have of geometrical figures Descartes says he cannot admit that they have at any time entered our minds through the senses He objects to the use of the word idea for images or what he calls pictures in the corporeal imagination i e in some part of the brain He criticizes those who never raise their minds above the thin s of sense so accustomed are they to consider nothing except by imagining it with the result that whatever is not capable of being imagined appears to them not to be intelligible at all

Against the maxim which Locke no less than Hobbes or Berkeley would approve—that "there is nothing in the understanding which has not first of all been in the senses —Descartes offers the ideas of God and of the soul as plainly contrary examples ideas clearly in the mind which have no orig n in sensation or fancy Those who desire to make use of their imagination to understand these ideas he adds act in the same way as if to hear sounds or smell odours they should wish to make use of their eyes

In making a sharp distinction between the faculties of sense and understanding or reason Descartes seems to share the position of Plato Aristotle Aquinas Spinoza and Kant Yet for Descartes as for Plato the intellect in its own sphere of objects is l ke the senses in the rs since each is able to behold its proper objects intuitively whereas for Kant as for Aristotle sense alone is a faculty of intu tion The ideas by which we apprehend intelligible objects acco ding to Plato Descartes and Sp noza are not de ived from sensations or images According to Ari totle and Aquinas on the other hand the intellect abstracts all its ideas or universal concepts f om the p rticulars of sense

In this respect A istotle and Aqu na seem to be n agreement with Locke even though that agreement must be qual fied by the obse vation that Locke sees no need for a special faculty to obtain abstract ideas On the other hand Plato Aristotle Aquinas and Descartes all seem to agree in holding that understanding is as immaterial as its objects Unlike sense which requires bodily organs rational thought is according to them an activity peculiar either to the soul itself or to a power of the soul which is not embodied in an organ as the power of vision is embodied in the eye or the powers of memory and imagination are embodied in the brain

William James denies this He holds the view that all forms of consciousness are someho v functions of the brain Yet he also insists that percept and concept are radically distinct forms of consciousness To this extent James makes as sharp a separation as the authors above mentioned bet veen the sensory and the rational phases of thought He places sensation perception memory and imagination on one side and conception judgment and reasoning on the other But this is for him not a distinction of faculties or powers but only of different functions which one and the same mind is able to perform

CERTAIN POINTS OR problems in the traditional discussion of sense are unaffected by the basic issues just considered For example most writers tend to make some distinction between the special exterior senses such as vision and hearing touch and taste and the several interior senses which Aquinas enumerates as the common sense memory imagination and the estimative or cogitative powers Yet not all who consider memory and imagination as activities consequent upon sense perception call them interior senses Not all reco nize a distin t estimative or co tative power even whe they reco nize a kind of th nking about particulars done by animals and men with sensory materi al Nor do all who discuss d scriminat on or comparison nd the collation or comb ning of the impressions received from the special senses attribute these funct ons to the sp cial faculty which Aristotle fi t calls the ommon sense

F equ ntly th same analyt c l point is made in different v ys As nd cated n th chapter on QU LITY the dist n t on which Aristotle

and Aquinas make between proper and com mon sensibles according as the quality such as color and odor belongs to a single sense or like shape and motion can be perceived by two or more senses seems to parallel the dis tinction between what Locke calls secondary and primary qualities But where Locke and others treat the so called secondary qualities as entirely subjective occurring only in the experience of the sentient organism and having no reality in the sensible thing Aristotle takes a contrary view

When it is not actually seen or smelled the sensible thing according to Aristotle is po tentially colorful or odoriferous just as when it is not actually seeing or smelling the sense of vision or smell is also in a state of potenti ality with respect to these qualities But when the sensible thing is actually sensed then Aristotle says the actuality of the sensible object and of the sensitive faculty is *one* actu ality The thing is actually colored when it is a tually seen though it is only potentially colored when it is merely able to be so seen Earlier students of nature he writes were mistaken in their view that without sight there was no white or black without taste no savor This statement of theirs is partly true partly false sense and the sensible object are am biguous terms *i e* they may denote either po tentialities or actualities The statement is true of the latter false of the former

Another example of the same analytical point (which is made differently by different writers) concerns the distinction between sen sation and perception According to William James perception involves sensation as a por tion of itself and sensation in turn never takes place in adult life without perception also being there The difference between them is that the function of sensation is that of mere ac quaintance with a fact whereas percept on s fun tion is knowledge *about* a fact and this knowledge admits of numberless degrees of complication Hearing a sound is having a sensation but perception occurs when as James points out we hear a sound and say a horse-car

But James does not agree that when percep tion is so described it is as other psychologists have suggested a species of reasoning If ev ery time a present sign suggests an absent real ity to our mind we make an inference and if every time we make an inference we reason then James admits perception is indubita bly reasoning Only one sees no room in it for any unconscious part No inference is con sciously made in perception and James thinks that to call perception unconscious reasoning is either a useless metaphor or a positively mis leading confusion between two different thin s In his opinion perception differs from sensa tion [simply] by the consciousness of further facts associated with the object of sensation For him perception and reasoning are coor dinate varieties of that deeper sort of process known psychologically as the association of ideas

What James treats as the object of sensation Aristotle refers to as a quality sensed by one or more of the special senses either a proper or a common sensible What James treats as the ob ject of perception Aristotle calls an accidental object of sense because it is strictly not sen sible at all by any of the exterior senses singly or in combination When we call the white object we see the son of Diares or a man we have an example of an accidental sensible or an object incidentally perceived because being the son of Diares is incidental to the directly visible white patch we see with our eyes

This distinction between sensation and per ception seems to have a bearing on the prob lem of the fallibility of the senses Again the same point seems to be differently made Aris totle for example holds that whereas each of the senses is normally infallible in the appre hension of its proper object or appropriate quality error is possible in the perception of the complex thing which is not strictly an ob ject of the special senses While the perception that there is white before us cannot be false he writes the perception that what is white is this or that may be false

Lucretius likewise insists that the senses themselves are never deceived but that all the errors attributed to the sen es are the result of a false inference or judgment which reason makes on the basis of the evidence presented by the senses That also seems to be the opinion of Descartes who thinks that no direct ex perience can ever deceive the understand ng if

it restricts its attention accurately to the object presented to it Thus if a man suffering from jaundice persuades himself that the things he sees are yellow this thought of his will be composite consisting partly of what his imagination presents to him and partly of what he assumes on his own account namely that the color looks yellow not owing to the defect in his eye but because the things he sees really are yellow We can go wrong only when the things we believe are in some way compounded by ourselves Descartes holds that no falsity can reside in sensations themselves but only in those judgments which on the basis of sensations we are accustomed to pass about things external to us

THE MOST FUNDAMENTAL judgment which men make on the basis of sensation is that an external world exists—a reality not of our own making Descartes argues from the evidence of the senses to the independent existence of a world of bodies Though Berkeley argues on the contrary that bodies do not exist except as objects of perception he attributes the sense impressions over which we seem to have no control to the action of an external cause—to God who uses them as signs for instructing us

Locke defines sensitive knowledge as that which informs us of the existence of things actually present to our senses We may know our own existence intuitively and God s existence demonstratively but the knowledge of the existence of any other thing we can have only by sensation And though he adds the notice we have by our senses of the existing of things without us be not altogether so certain as our intuitive knowledge or the deductions of our reason yet it is an assurance that deserves the name of knowledge

Against such views the most fundamental skepticism goes further than doubting the veracity of the senses because of the illusions and hallucinations they cause us to suffer By what arguments Hume asks can it be proved that the perceptions of the mind must be caused by external objects and could not arise either from the energy of the mind itself or from the suggestion of some visible or unknown spirit?

It is a question of fact he adds whether the perception of the senses be produced by external objects resembling them How shall this question be determined? By experience surely as all other questions of a like nature But here experience is and must be entirely silent The mind has never anything present to it but the perceptions and cannot possibly reach any experience of their connexion with objects The supposition of such a connexion is therefore without any foundation in reasoning

OUTLINE OF TOPICS

REFERENCES

To find the passa es cited use the numbers in heavy type h ch are the volume and page numbers of the pa sages referred to For example in 4 HOMER *Iliad* BK II [265 283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the pas sa e is in sect n d of pa e 12

P G S CTIONS When the text is p inted in one column the letters a and b refer to the upper and lower h lves of the p e For example in 53 JAMES *Ps h logy* 116a 119b the passage begi s in the upper half of page 116 and ends in the lo er half of p e 119 When the text is printed in two col mns the letters a and b refer to the upper and lower h lves of the left ha dside of the p ge the letters c and d t the upper and lo er halves of the right hand s de of the pa For example in 7 PLATO *Symp sium* 163b 164c the passage begins in the lower half of the left hand side of page 163 and ends i the upper half of the right hand side of p ge 164

AUTHOR S DI ISIONS One or more of the main divi ons of a work (such as PART BK CH SE T) a e s met mes incl ded in the r ference line numbe s in brack ts a e given in cer tain cases g *Il ad* BK II [265 283] 12d

BIBL REF RENCES The references are t book chapter and ve se When the King J mes and D uay ve si ns differ in t tle of books or in the number n of chapters or verses the Kin James ve si n is cited fi st and the D uay i dicated by a (*D*) follows *e g* OLD TESTA MENT *N hem ah* 7 45—(*D*) *II Esd as* 7 46

S MBO S The abbreviation esp alls the re der s ttention to one or m re e pecially rele ant parts of a whole refe ence passim s gnifies that the topic is discussed ntermit t ntly r ther than cont nuou ly in the w k or passage cited

Fo add ti nal informatio con rnin the style of the fere ces see the Explanation of Reference Style f r gener l gu dance in the use f *Th G eat Ideas* cons lt the P efa e

1 The n ture of sense

1 The power of sense s d stinct from the pow r of unde stand ng or re on

7 PL TO *Phaedo* 224a 225a 231 232a / *Rep b l* BK VI 386d 388a K VII 392c 393c / *Th aet tus* 534d 536a

8 ARISTOTLE *P ster or Analytics* BK I CH 31 120 -c / *M taphy cs* K H 4 [999b 4] 518b / *S ul* K I CH 5 647b 648d BK H 4 [4 9a29–b4] 661c d CH 8 664b d

9 ARISTOTLE *Eth* K IX CH 9 [117 16–18] 423d-424a

17 PLO INU *F st En ad* T I C 7 3d 4a / *F urth Enn d* TR V H 189b 190b / *F fth Enn d* TR I CH 2 3 216b 217b

18 AUGU TIN *C f ss n* BK X pa 12 0 71b 76 / *City of God* K VII CH 23 56b BK V I CH 6 269b K X CH 27 337d 338a

19 AQUINA *Summ Theolog a* R Q I A 3 52 53b Q 14 A 2 ANS nd REP I 76d 77d Q 75 A 3 ANS d R 380c 381b Q 78 A 407b-409 A 3 4 410a-413d

20 AQU NA *S mma Theologi a* P T I Q 50 3 8b 9a Q 56 5 33c 34b RT SU PL Q 70 A 2 896a 897d

31 DESCA T S *Rule* 13 X I 18b-25 / *M dit ti s* V 98d 99 / *Obj t s d Replies* 218 d 229d 230

42 K NT *Pu e Rea on* 14a c 23a 24 37b 39 98c 101d 102a 112d 113b 115b-c / *Fund Prin M taphy ic f M rals* 282b / *I tro Metaply c f Mo als* 385a-c / *Judgement* 570c 571c

53 J MES *Psych logy* 158b 159a 450a 451b 469a b 628b 631a

1*b* Sense a d intellect n rel tion to becoming nd b ing part cul s and un ers ls

7 PL O *Pha d us* 126b d / *Sympos m* 167a d / *Pha do* 224a 225a 231b 232b / *Republic* K V 383d 398c / *T maeus* 447b d 457b-458 / *The t tu* 534d 536a / *Soph t* 565 569a esp 568a 569

8 A IS OTL *Poster or Analyt* K CH [7 b33 7 a6] 98b-c CH 8 111b CH 3 120a K H 9 [16–b1] 136d / *Top cs* K CH 7 [3a23 32] 158d BK VI CH 4 [41b2 4] 194d 195 K III CH I [56 4 6] 211d 212a / *Phys* K H 5 [189 5 8] 264b-c / *M taphysics* K H I [980a28– 98 b13] 499a 500 H 6 [987a29– 8] 505b d K I CH 4 [999a24–b4] 518 b K V CH [1 35b34 1 36 1] 559b c / *S l* K CH 5 [4 7 7 8] 648b

9 A OTL *Eth* K V H 8 [42 1 -31] 391b K V c 3 [47a25 6] 397 d

11 N CO CHUS *Arithmet* K I 811c d

(1 *The nature of sense* 1b *Sense and intellect in relation to becoming and being, particulars and universals*)

17 PLOTINUS *Fourth Ennead* TR VI CH I 189b-190b / *Fifth Ennead* TR V CH I 228b 229c TR IX CH 5 248a 249a / *Sixth Ennead* TR I CH 27 28 266c 267c

18 AUGUSTINE *Confessions* BK VII par 23 50b c

19 AQUINAS *Summa Theologica* PART I Q 14 A 11 84c 85c Q 18 A 2 ANS 105c 106b A 3 ANS 106b 107c Q 54 A 5 288a d Q 57 A 1 REP 2 295a d A 2 295d 297a Q 75 A 5 ANS 382a 383b Q 76 A 2 REP 4 388c 391a Q 86 A 1 ANS and REP 4 461c-462a A 3 463b d PART I II Q 1 A 2 REP 3 610b 611b Q 2 A 6 ANS 619d 620d Q 29 A 6 ANS and REP 1 3 748b 749a

28 HARVEY *On Animal Generation* 332a 333b

31 DESCARTES *Rules* XII 18b 25a XIV 28a 33b passim / *Discourse* PART IV 53b / *Meditations* II 79a 81d esp 81d VI 96b d / *Objections and Replies* 130a b 136d 137a 218c d 219b c 229d 230c

38 ROUSSEAU *Inequality* 341d 342a

43 MILL *Utilitarianism* 445d-446a

53 JAMES *Psychology* 307a 311a esp 309a 311b 312b [fn 1]

1c The distinction between perception or intuition and judgment or reasoning the transcendental forms of intuition

42 KANT *Pure Reason* 23a-41c esp 23a 24a 34a c 38c-41c 42a 45d-46a 47c-48a 53b 54b 58a 64a esp 61a 64a 66a d 98c 109d 110a 112d 113b 115b c 199b c / *Fund Prin Metaphysic of Morals* 282b c / *Practical Reason* 307d 308b 329b c / *Judgement* 461a 475d esp 461a-462d 464c-467a 474b-475d 482d-483d 492c d 570b 572c

53 JAMES *Psychology* 629a 631a

1d Sense perception as a primary function of the mind or understanding sensations as received impressions the distinction between sensation and reflection ideas and notions percepts and concepts

12 LUCRETIUS *Nature of Things* BK III [231 251] 33a b BK IV [26-41] 44b d [722-817] 53d 54d

23 HOBBES *Leviathan* PART I 49a d 52b c 54a PART IV 258b c

31 SPINOZA *Ethics* PART II PROP 14 18 380c 382b

35 LOCKE *Human Understanding* BK I CH I SECT 15 98d 99 BK II CH I 11 121a 128c esp CH I SECT 8 121a 123a SECT 20 25 126d 127d CH III SECT 1 128d CH V I SECT 1 133b c SECT 8 134b-c CH IX 138b 141a passim esp SECT 1 138b c SECT 15 141a CH I SECT 17-CH XII SECT 1 147 b CH XIX SECT 1 175b CH XX SECT 1 176b-c CH XXI SECT 4 178d 179c SECT 74-75 200a d CH XXII SECT 2 201a CH XXIII SECT 1 204a b SECT 5 205a b SECT 15 208c d SECT 29 211d 212a SECT 32 212c d BK III CH IV SECT 11 261d 262b CH V SECT 2 263d 264a BK IV CH II SECT 11 311c 312a CH IV SECT 4 324c

35 BERKELEY *Human Knowledge* SECT 1 413a b SECT 25-33 417d-419a passim SECT 36 419c d SECT 135 142 440a-441c passim esp SECT 139-140 440d-441a SECT 142 441c

35 HUME *Human Understanding* SECT II 455b-457b passim

42 KANT *Pure Reason* 115b c

53 JAMES *Psychology* 144a 145a 160a 313b-314a 452a-457a esp 453a-454a 455a-456a 472b-473a 593a

54 FREUD *Interpretation of Dreams* 352d

2 Sensitivity in relation to the grades of life

2a The differentiation of animals from plants in terms of sensitivity

7 PLATO *Timaeus* 469d-470a

8 ARISTOTLE *Soul* BK I CH 5 [410^{b}16-411^{a}2] 640d 641a BK II CH 2 [413 31 ^{b}4] 643c CH 3 [414^{a}28 33] 644c [414^{b}32 415 3] 645a b CH 12 [424 32-^{b}4] 656b c / *Sense and the Sensible* CH I [436^{b}8 12] 673c / *Sleep* CH I [454 12 18] 696c d [454^{b}23 455 2] 697b-c / *Youth Life and Breathing* CH I [467^{b}23 25] 714b

9 ARISTOTLE *History of Animals* BK VIII CH I [588^{b}4-589 1] 114d 115b / *Parts of Animals* BK II CH 10 [655^{b}33-656 4] 182a BK IV CH 10 [686^{b}23-687^{a}1] 218b c / *Gait of Animals* CH 4 [705^{a}26-^{b}13] 244a b / *Generation of Animals* BK I CH 23 [731^{a}24 ^{b}8] 271c d BK II CH I [732 12 14] 272c CH 3 [736^{a}25 ^{b}14] 276d 277b CH 4 [740^{b}25]-CH 5 [741 30] 281d 282b BK III CH 7 [757^{b}14 30] 298c d BK V CH I [778^{b}30-779 4] 321 b / *Ethics* BK I CH 7 [1097^{b}33 1098 2] 343b

10 GALEN *Natural Faculties* BK I CH I 167a b

12 AURELIUS *Meditations* BK VIII SECT 7 286a BK IX SECT 9 292b-d

18 AUGUSTINE *City of God* BK VII CH 23 256b c

19 AQUINAS *Summa Theologica* PART I Q 18 A 2 ANS and REP 1 105c 106b A 3 ANS 106b-107c Q 69 A 2 REP 1 361c 362c Q 78 A 1 ANS 407b-409a

28 HARVEY *On Animal Generation* 368a b 369d 370b 372b 397 398c 457c d

35 LOCKE *Human Understanding* BK II CH IX SECT 11 15 140b 141a

49 DARWIN *Origin of Species* 114b-115c esp 115a b

53 JAMES *Psychology* 8a

54 FREUD *Unconscious* 429c d

2b The degrees of sens tivity in the animal kingdom the genetic order of the several senses

8 ARI TOTLE *Soul* BK II CH ~ [413^{b}4 10] 643c [414 3] 644 BK II CH II [433^{b}31 434 4] 666d CH 12 13 667a 668d / *Sense and the Sensible* CH I [436^{b}12 437^{a}17] 673c 674a

9 ARI TOTLE *Hist y of Animals* K I CH 3 [489^{a}17 19] 10b CH 9 [491^{b}26–34] 13c CH 11 [49 ^{a}7 30] 14a b BK II CH 12 [504 19 23] 26 I 13 [5 5 3 -34] 27d 28a BK IV CH 7 [532 5-7] 58d CH 8 59d 62a BK V CH 16 [548^{b}10-15] 75b c BK VIII CH I [588^{b}17 31] 115 b / *Parts of A mal* BK II CH 8 [653^b 2 29] 179b CH 10- 7 181d 188a c passi n BK I CH 4 [667^{a}9-14] 195b BK IV CH 5 [68 ^{b}14 17] 212b H II [690^{b}17 -691^{a}28] 222d 223c / *Gait of An mal* CH 4 [705^{b}9- 3] 244b / *Generat on of Anim ls* BK I CH 23 [731^a-4 ^{b}8] 271c d BK V CH I [778^{b}20]-CH 2 [781^{b}29] 321a 324a

12 LU R TIUS *Nature of Thing* BK IV [633-721] 52c 53d

19 AQUINAS *Summa Theolog ca* PART I Q 18 A 3 ANS 106b 107c Q 78 A 3 ANS 410a 411d

31 DESCARTES *Discourse* PART V 59a c

35 LOCKE *Human Understa d ng* BK II CH IX SECT II 15 140b 141a

49 DARWIN *Descent of Man* 261c 262a 366c 397d 398a 402b-c 406 432 434c pas im 447b-448a pa sim 456b d 474a b 480a-482b p ssim 529a b 553d 554b 568d 569b 595b 596a

53 J ME *Psychology* 27a 42b passim esp 40a 41b

2 Comparisons of human and animal sensi tiv ty

8 ARISTOTLE *Soul* BK II CH 9 [421 6–16] 652 [421 19–26] 652d [4 1^{b}8 422^{a}6] 653a c / *Sense and the Sensible* CH I [436^b 7 437 17] 673d 674a CH 4 [440^b 8 441 3] 678b c CH 5 [443^b 7 445 31] 681c 683b

9 ARISTOTLE *H st ry of A imals* BK I CH 15 [494^{b}17 9] 16d / *Parts f Anim ls* K II CH 16 [660 13]-CH 17 [660^{a}23] 187 / *Generati n of A imal* BK V CH [781^b 7 23] 323d 324a / *Ethic* BK III CH 10 [11 8 7 ^{b}7] 364d 365a

12 LUC ETIUS *N ture of Thing* K IV [706–721] 53c d

19 AQUIN S *Summa Theol g ca* PART I Q 81 A 3 ANS a d REP 2 430 -431d Q 9 A 3 R P I 3 486b-487d

20 AQUINAS *Summa Theologica* PART III Q 2 A 2 REP 711d 712d

25 MONTA GNE *Ess y* 286a 287b 290c 291b

30 BA N *N tum Org n m* BK II AP I 40 173c-d

31 DESCARTES *Objectio s a d Replies* 156a d 229d 230c

35 LOCKE *Huma Understa d ng* K I CH IX SECT 12 5 140c 141a

38 MONTESQUIEU *Spirit of Laws* BK I 1d 2a

38 ROUSS AU *In quality* 337d 338a

42 KANT *Judgement* 479b

46 HEGEL *Philosophy of Right* ADDITIONS 25 121a

48 M LVILLE *Moby Dick* 244 245b

49 D RWIN *D scent of Man* 259d 260a 261c 262a 301c 302b 366c 568d 570a

53 J M *P ych logy* 19b-42b passim esp 41a b

3 The analysis of the power of sense its organs and acti ities

3a The anatomy and physiology of th sen es the speci l sense-organs nerves brain

7 PLATO *Timaeus* 454b-455a

8 ARISTOTLE *Soul* BK I CH I [412^{b}18–24] 642d CH 8 [420^{a}2 9] 651b-c CH 9 [421 19-26] 652d [4 1^{b}8 42 6] 653 c CH 10 [422^{b}1 9] 654a CH II [422^{b}17 424 9] 654b 655d BK II CH 12 [424^{a}24]-BK I I CH I [4 5 13] 656 657a K III CH 2 [426^{b}8 17] 658d CH 13 [435 11 ^{b}3] 668a b / *Sense and the Sensible* CH 2 5 674 683b p ssim / *Youth L fe and B eathing* H 3 [468^{b}28]-CH 4 [469^{b}6] 715b 716a

9 A I TOTLE *H story of An mals* BK I CH 4 [489^{a}24 27] 10c CH 15 [494^b I 16] 16d BK I CH 10 25b c CH 12 [504 19-23] 26 CH 13 [5 5 3 34] 27d 28a BK IV H I [5 4 33 ^{b}5] 50a CH 7 [532 5 10] 58d 59a CH 8 59d 62a / *Part of Animals* BK II CH I [647 I 34] 171a CH 8 [653^{b}19- 9] 179b CH 10–17 181d 188a c esp CH 10 [656^{a}14]-CH 12 [657^a-4] 182b 183d CH 16- 7 185d 188a c BK III CH 4 [666 ^{b}1] 193d 194b CH 5 [667^{b}2 32] 196 BK IV CH 5 [678^b 18] 208b c [681^b 5-682 9] 212b d CH II [690^b 8-69 ^{a}28] 222d 223c / *M tion of Animal* CH 9 [7 ^{b}2 5] 238b / *Gener t on f Animals* BK II CH 6 [743^{b}25-744 8] 285a b K V CH I [779^{a}27]-CH ~ [781^b 9] 321c 324a

10 HIPPOCRAT *Sacred Dis se* 159c 160a

12 LUCR TIUS *Natu e of Things* K III [136–160] 31d 32a [231 251] 33a b [359–369] 34d [406–416] 35b c BK IV [37–253] 47b [3 4-352] 48c d [6 5–629] 52b c

16 KEPL R *Ep tom* BK IV 855a

17 P OTINU *F urth E n ad* TR II CH 3 153d 154b

19 AQU NA *Summa Th logica* P RT I Q 76 A 5 ANS nd REP 2 394 396a Q 77 A 5 REP 3 403d-404

23 HOBB S *Leviathan* PA T I 49a d 50b 51b PART I I 172c P RT IV 258b c

28 HAR Y *Ci culation f the Blood* 326b / *On An m l Generat n* 455 456b 458a esp 457a d 494b

30 BACON *Novum Org num* BK A H 7 157b d

31 D S A ES *Rules* X 19 20d / *Objecti ns a d Repl s* 209c

(3 *The analysis of the power of sense its organs and activities* 3a *The anatomy and physiology of the senses the special sense organs nerves brain*)

34 NEWTON *Optics* BK I 384b 385b
35 LOCKE *Human Understanding* BK II CH III SECT I 128d 129a CH VIII SECT I 135a CH XXIX SECT 3 34b-c
36 STERNE *Tristram Shandy* 270a 271b
38 MONTESQUIEU *Spirit of Laws* BK XIV 102b d 103b
48 MELVILLE *Moby Dick* 244a 245b
49 DARWIN *Origin of Species* 85d 87c 90b c / *Descent of Man* 259c 261c 397d 398a 595d 596a
53 JAMES *Psychology* 8a 52b esp 27a 42b 151a b 453a 456b-457 497a 501b esp 500a 501b 533a 538b passim esp 533a 534a 536a 538a b 546b 547b [fn 1] 562b 563a esp 562b 563b [fn 1] 575b 584a 768b 787a
54 FREUD *Interpretation of Dreams* 351b 352b 367b c / *Beyond the Pleasure Principle* 647a 648a

3b The distinction between the exterior and interior senses

8 ARISTOTLE *Posterior Analytics* BK II CH 19 [99b36-100a3] 136b / *Soul* BK III CH 2 657d 659c CH 3 [428 5 16] 660b CH 7 [43 14 b] 663d 664a / *Sleep* CH 2 [455 3 b 3] 697c 698b
17 PLOTINUS *Fourth Ennead* TR III CH 29 157b d
19 AQUINAS *Summa Theologica* PART I Q 78 A 4 ANS and REP 1 2 411d-413d Q 81 A 3 REP 3 430c 431d PART I II Q 35 A 2 REP 773b d
23 HOBBES *Leviathan* PART I 50a c 52b c PART I 258b-c
28 HARVEY *On Animal Generation* 457b
31 DESCARTES *Rules* XII 19a 20a
42 KANT *Pure Reason* 24 b 26b 29d / *Intro Metaphysic of Morals* 386d 387 c
54 FREUD *Interpretation of Dreams* 367b-c 384c 385b

3b(1) Enumeration of the exterior senses their relation and order

8 ARISTOTLE *Generation and Corruption* BK II CH 2 [329 6-1] 429c / *Soul* BK I CH 7 II 649b-656a BK III CH 1 2 656b d 659c / *Sense and the Sensible* 673 689a c
9 ARISTOTLE *History of Animals* BK IV CH 8 59d 62a / *Parts of Animals* BK I CH 10 [656 24]-CH 11 [657a 8] 182c 183c
10 HIPPOCRATES *Sacred Disease* 159d
12 LUCRETIUS *Nature of Things* BK II [434 443] 20c [680-685] 23 d BK IV [4 8 499] 50b d
19 AQUINAS *Summa Theologica* PART I Q 18 A 3 106b 107c Q 6 A 5 394c 396 Q 8 A 3 410a-411d Q 91 A 3 REP 1 486b-487d PART I II Q 31 A 6 756d 757c
20 AQUINAS *Summa Theologica* PART III SUPPL Q 82 A 4 972d 974c Q 91 A 4 REP 1 1022d 1023d
28 HARVEY *On Animal Generation* 457b c
31 DESCARTES *Rules* XII 19a
35 LOCKE *Human Understanding* BK II CH II SECT 3-CH III SECT I 128b 129a CH IX SECT 8-9 139c 140a
35 BERKELEY *Human Knowledge* SECT I 413a b SECT 42 44 420 -421a
53 JAMES *Psychology* 62a 63a 569b 570a 650b 651a

3b(2) Enumeration of the interior senses their dependence on the exterior senses

8 ARISTOTLE *Posterior Analytics* BK II CH 19 [99b36-100 6] 136b c / *Metaphysics* BK I CH 1 [980a22 b24] 499a / *Soul* BK III CH 3 [427b 10 429 9] 660d 661b CH II [433b31 434a9] 666d / *Memory and Reminiscence* CH 1 690a 692b
9 ARISTOTLE *Motion of Animals* CH 8 [702 19 20] 237c / *Rhetoric* BK I CH II [1370 28 31] 613c
17 PLOTINUS *Fourth Ennead* TR III CH 29 157b-d TR IV CH 8 161d 162b TR VI 189b-191c
18 AUGUSTINE *Confessions* BK X par 12 15 74b 75b
19 AQUINAS *Summa Theologica* PART I Q 78 A 4 411d-413d Q 84 A 7 REP 2 449b-450b Q III A 3 REP 1 570b 571b
21 DANTE *Divine Comedy* PURGATORY XVII [13 18] 78c
23 HOBBES *Leviathan* PART I 50a-c 52b c 54b c PART IV 262a c
28 HARVEY *On Animal Generation* 334c d
31 DESCARTES *Rules* XII 19a 20d
31 SPINOZA *Ethics* PART I PROP 17 18 380d 382b
35 LOCKE *Human Understanding* BK I CH III SECT 21 118b 119a BK II CH II SECT 2 3 128a-c CH X 141b 143d esp SECT 7 142c d CH XI SECT 1-7 143d 145b CH XII SECT 1 147b-c
35 HUME *Human Understanding* SECT II DIV 13 455d-456b
42 KANT *Pure Reason* 41c-42b 54b-55a
53 JAMES *Psychology* 13a 391a 480a
54 FREUD *Interpretation of Dreams* 352a-c

3c The activity of the exterior senses

3c(1) The functions of the exterior senses the nature and origin of sensations

7 PLATO *Meno* 177b d / *Republic* BK VI 385c-386c / *Timaeus* 453b-454a 454c-455a 463d 465d / *Theaetetus* 518b 522b 533b-534b / *Philebus* 621a c
8 ARISTOTLE *Categories* CH 8 [9a28 b9] 14b-c / *Topics* BK I CH 14 [105b4-9] 149b BK II CH 5 [125 15 18] 174d / *Generation and Corruption*

3c(2) The ttributes of sensat on inten ty ext nsity affective tone the psycho phys cal law

3c(3) The cl ss ficat on of n t ons o s n qualit e p oper nd common ns bl pr ma y and second ry q l e

(3c *The activity of the exterior senses.* 3c(3) *The classification of sensations or sense-qualities: proper and common sensibles; primary and secondary qualities.*)

428b-d-431a / *Soul* BK II CH 6 [418^{a}6-19] 648d-649a CH 9 [421^{a}2,-^{b}] 652d CH 10 [422^{b}10]-CH 11 [423^{b}33] 654b-c BK III CH 1 [425^{a}14-29] 657b-c [425^{b}4-10] 657c-d / *Sense and the Sensible* CH 1 [437^{a}3-10] 673d-674a CH 3-5 676a-683b CH 6 [445^{b}4-446^{a}20] 683b-684c

10 Galen *Natural Faculties* BK I CH 6 169c-d

12 Lucretius *Nature of Things* BK II [398-521] 20a-21c [730-864] 24b-26a

19 Aquinas *Summa Theologica* PART I Q 78 A 3 esp REP 2 410a-411d A 4 REP 1-2 411d-413d

20 Aquinas *Summa Theologica* PART III SUPPL, Q 92 A 2 ANS 1032b-1034b

23 Hobbes *Leviathan* PART I 49b-d PART III 172b

31 Descartes *Rules* XII 19a-c / *Objections and Replies* 163b 228c-229c 231a-b

34 Newton *Principles* BK III RULE III 270b-271a / *Optics* BK I 428a-b

35 Locke *Human Understanding* BK II CH I SECT 3 128d-129 CH 1 131b CH VII SECT 1 131c CH VIII SECT 6 134b-138b CH IX SECT 8-9 139c-140a CH XXI SECT 3 178d SECT 75 200b-d CH XXIII SECT 7-13 205d-208b SECT 37 214a-b CH XXX SECT 2 238b-c CH XXXI SECT 2 239b-d BK II CH IV SECT 16 263b-c BK IV CH III SECT 11-14 315d-316d SECT 28 322a-c

35 Berkeley *Human Knowledge* SECT 9-15 414d-416a SECT 25 417d-418a SECT 73 427b-c SECT 1-2 432d-433a

35 Hume *Human Understanding* SECT X DIV 122 505c-d

42 Kant *Pure Reason* 15b-c 29d-33d esp 30d-31a 31d-32a 32d-33b [fn 1]

53 James *Psychology* 185a-b 502b-503b 569b-570a 572a-b 627a-b 650b-651a

3c(4) The distinction between sensation and perception: the accidental sensible; complex ideas of substance

8 Aristotle *Metaphysics* BK XII CH 10 [1018^{a}-18 21] 619c / *Soul* BK CH 6 [418^{a}20-26] 649a / *Sense and the Sensible* CH [437^{a}3] 673d-674a CH 6 [446^{b}18-27] 685a-b

20 Aquinas *Summa Theologica* PART III SUPPL, Q 92 A 2 1032b-1034b

35 Locke *Human Understanding* BK CH IX SECT 8-10 139b-140b CH XXIII SECT 1 204a-b

35 Berkeley *Human Knowledge* SECT 1 413a-b SECT 42-44 420c-421a SECT 148 442b-d

42 Kant *Pure Reason* 113b-c

53 James *Psychology* 452a-453a 502-505b 526b-527a

3c(5) Sensation and attention: pre-perception and apperception; the transcendental unity of apperception

8 Aristotle *Sense and the Sensible* CH 7 685c-689a-c

21 Dante *Divine Comedy* PURGATORY IV [1-18] 57c

42 Kant *Pure Reason* 14a-108a-c esp 14a-15c 23a-33d, 41c-42b 48d 59b 66d 93c

48 Melville *Moby Dick* 244a-245a

51 Tolstoy *War and Peace* BK XIV 603c-d

53 James *Psychology* 184b-185a 232b-235a 262a-291a esp 262b-268a 275b-276b, 282a-288a 295b-297a 328a-329a 469a-b 522b-525a 562a-b 620b-621a

3d The activity of the interior senses

3d(1) The functions of the common sense: discrimination, comparison, association, collation or perception

8 Aristotle *Soul* BK III CH 1 [425^{a}14-^{b}10] 657b-d CH 2 [426^{b}8-427^{a}14] 658d-659c / *Sleep* CH 2 [455^{a}3-^{b}13] 697c-698b

10 Hippocrates *Sacred Disease* 159c-d

16 Kepler *Epitome* BK IV 855a

17 Plotinus *Fourth Ennead* TR III CH 3 143b-c TR VII CH 6-7 194b-195b

19 Aquinas *Summa Theologica* PART I Q 78 A 4 ANS and REP 1-2 411d-413d Q 85 A 3 REP 467b-468a

23 Hobbes *Leviathan* PART I 52-b

28 Harvey *On Animal Generation* 457b-458a esp 457b-c

31 Descartes *Rules* XII 19c-d

35 Locke *Human Understanding* BK II CH XI SECT 1-7 143d-145b

42 Kant *Pure Reason* 14a 51c-d 54b-64a / *Judgement* 493c-d 528c-529b

53 James *Psychology* 185a-b 313b-341a esp 313b-319a 322b-326a 336a-340a 344b-346a 360a-399b esp 378a-380a 396a-39 399-b 411a-420b esp 414a-416b [fn 1], 415a-418a 502b-504b 506a-507a 525a-526b 54 552a esp 547a-b 551b-552a 561a-575a esp 561a-570a 573a 584a-589b esp 584-b & 868b

54 Freud *Interpretation of Dreams* 367b-c 384c-385c

3d(2) Memory and imagination as interior powers of sense

7 Plato *Theaetetus* 523d-524a / *Philebus* 621a-b

8 Aristotle *Posterior Analytics* BK II CH 19 [99^{b}20-100^{a}9] 136a-c / *Metaphysics* BK I CH 1 [980^{a}28-^{b}24] 499a / *Memory and Reminiscence* 690a-695d

9 Aristotle *Motion of Animals* CH 7 [701^{b}13]-CH 8 [702^{a}21] 237a-c / *Rhetoric* BK I CH 11 [1370^{a}28-31] 613c

17 PLOTINUS F urth Ennead TR III CH 28 32 156d 159a TR VI 189b 191c
18 AUGUSTINE Conf ssions BK X par 12 17 74b 75d
19 AQUINAS Summ Tl eol gica PART I Q 55 A 2 REP 2 289d 290d Q 78 A 4 ANS and R 3 411d-413d
20 AQUINAS Summa Theolog ca PART I I Q 50 A 3 REP 3 8b 9a
23 HOB ES Leviathan PART I 50a 52b esp 50 d PART IV 258b c 262a-c
30 B CON Advancement of Le rning 55b-c
31 DESCARTES Rules XII 19d 20b-d / Objec t ons and Repl es 208d 209a 218c 219b-c
31 S IN Z Eth cs PART II PROP 17 18 380d 382b ART III POSTULATE 2 396a
35 LOCKE Hum Understand ng BK II CH X S CT I 2 141b-c SECT 7 142c d
38 ROUSSE U In qual ty 341d 342a
42 KA T Pure Reason 41c-42b 54b-64a / Judgement 493c d
46 HE EL Philos phy of History PART I 219d 220a
53 JA ES P y hology 13a 15a e p 13a 145a 421b-431b pass m esp 424b-425a 480a 501b esp 480a b 497a 501b
54 F UD I terpretat on of Dreams 352a d

d(3) Th estimative or cogitati e power n sti ctive recognition of the harmful and beneficial

6 HER OTU History BK II 63b-c
9 ARIS OTL Histo y of A mals K VI I CH 12 [596b o-28] 122d BK IX CH 5-6 136d 138b passim
17 PLOTINUS Fou th Ennead TR IV CH 20 167d 168b
19 AQUIN S Summa Th log a PART I Q 59 A 3 AN 308b 309a Q 76 A 5 RE 4 394 396a Q 78 A 4 ANS nd RE 4-5 411d-413d Q 81 A 2 RE 2 429c-430c A 3 ANS and RE 2 430 -431d Q 83 A I ANS 436d-438a Q 96 A I ANS and R P 4 510b-511b PART I II Q 29 A 6 ANS 748b 749
22 CHAUCER Nu s Priest s Tal [5,279 87] 457b
25 MONTA GNE Ess ys 286d 287b
28 H RV Y On A im l Generat n 456d 457
31 DES ARTES M d tat ns VI 100a d
35 LO KE Hum n Under tandi g K CH II SECT 3 104b d BK II H X E T 3 141c d CH X S T 5 144d 145 E T II 145d 146a
38 R US EAU Inequ lity 337d 338a
48 M LV L Moby Dick 144a
49 DA WIN O g n f Specie 121 122c / D sc nt f M 287d 288a 290c 291a 292b c
53 JAM Psy h logy 13 708a 709a 720b-725a pass m 729b
54 FR UD Gener l Introd ct n 607d 609 esp 607d 608c 612 614a esp 613d 614 623b-c / Beyond the Pleasure Principle 640d 641a / / I hibitions Symptoms and An iety 720a 721c esp 720c d 737b d 751a 752b / New Introductory Lectures 845a 846a

3e The relation of sense to emotion will and mo ement the conception of a ensit e appet te

7 PLATO Phaedrus 128a 129c / Republic BK IV 350b 353d esp 352c d BK X 421a b / T ma us 466a 467b / Laws BK VI 712b
8 ARISTOTLE Physics BK VII CH 3 [246b20-247 19] 330a b / S ul BK II CH 2 [413b17 24] 643d CH 3 [414a28-b16] 644c d / D eams CH 2 [46 34 b27] 704b d
9 ARISTOTLE Mot on of Animals CH 6 [700b4]-CH 8 [702 22] 235d 237 / Ethics BK I I CH 10 [1118 I b7] 364c 365a BK VI CH 2 [1139 16-21] 387d BK VII CH 3 [1147 25 b6] 397c d CH 4 [1148 4 22] 398b c CH 6 [1149 23 b3] 399d-400a
12 LUCR TIUS Nature of Th gs BK IV [877 89] 55d
12 EPICTETUS D scou ses K II CH 23 170a 171a
17 P OTINUS F urth E n ad TR I I CH 28 156d 157b TR IV CH 20 167d 168b
18 AUGUSTINE Conf ions BK II p I-2 9a b p r I 11a b K III par I 13b c
19 AQUINAS S mma Theolog a PART I Q 6 A I RE 2 28b-d Q 18 A 3 ANS 106b 107c Q 78 A I 407b-409a Q 81 428d-431d Q 82 A 2 REP 3 432d 433c PART I-I Q A 2 REP 3 610b 611b Q 2 A 6 RE 2 619d 620d Q 7 A 7 690d 692a QQ 22 48 720b d 826a c p s sim sp Q 22 A 3 722d 723b
20 AQU NA Summa Theologica PART I II Q 56 AA 4-5 32b 34b
21 DANTE D ne Com dy PURGATORY XVI [85-] 77d
23 HO E Leviathan PART I 61a d 62b 64a c
25 MONTAIGNE Ess ys 288a 290b
27 SHAK S EAR Hamlet ACT III S IV [65-81] 55b
30 B CON Adva cement of Learning 55b c
31 SP NO A Eth cs ART PRO 9 399b-c
42 KANT Pur Reaso 164b c 235c d / Fund Prin Metaphy ic of Moral 259a 265b d [fn 1] 270c d 284d 285a / Pr ct l Rea n 298d 300 341c 342a / I tro M t phy ic f Moral 385c 386d / Judgement 477b 586a b
53 JAM P ychol gy 13a 15a 51a b 521 522a 694 699a 738a 759a esp 743a 745b 754b 755b 757b 759a 767b 794a esp 768a 771a 790 794 808b 810b 812a 813a 827b 835a esp 827b 828a 830b 831b
54 FR U I terp t t on f D m 351 353b esp 351d 352a 363 364b / I st nct 412 413d 419 -420c esp 420 / Bey d the Ple u P nciple 648b / Eg d Id 701b

4 The character of sensitive knowledge

7 PLATO *Phaedo* 224a 225a 231c 232a / *Republic* BK VI VII 383d 398c / *Theaetetus* 517b 536a

8 ARISTOTLE *Posterior Analytics* BK I CH 31 120a c / *Metaphysics* BK I CH I [980a20-b4] 499a [981b10-13] 499d 500a BK IV CH 5 [1009b1 17] 528d 529a [1010b1-1011 2] 530a c BK XI CH 6 [1062b34 1063 9] 591a b

17 PLOTINUS *First Ennead* TR I CH 3 7 1d 4a / *Fourth Ennead* TR III CH 26 155c TR IV CH 20 167d 168b CH 23 25 169c 171b TR V 183a 189b

18 AUGUSTINE *Confessions* BK X par 10 11 73d 74b BK XII par 5 100a b / *Christian Doctrine* BK II CH 27 650a

19 AQUINAS *Summa Theologica* PART I Q I A 4 ANS and REP 3 53b 54c Q 14 A 6 REP 1 80a 81c Q 78 A 3 ANS 410a 411d A 4 ANS and REP 4-6 411d 413d

28 HARVEY *On Animal Generation* 332a 333c

31 DESCARTES *Rules* XII 19a 20a / *Meditations* VI 96b 103d / *Objections and Replies* 136d 137a 163b 229d 230d

31 SPINOZA *Ethics* PART II PROP II 16 377b 380d

35 LOCKE *Human Understanding* BK II CH XX II SECT 29 211d 212a BK IV CH II SECT 14 312b d CH II SECT 2-5 313a c SECT 21 319c CH XI 354c 358c

35 BERKELEY *Human Knowledge* SECT 18 416b SECT 135 145 440 442a passim

42 KANT *Pure Reason* 23a 24a 30b 31a esp 30b c 34a b 54b 55a 58a 59b

53 JAMES *Psychology* 157b 168a esp 158b 161a 167b 453a-479a esp 453 454 456b 459b 469a b

4a Comparison of sensitive with other forms of knowledge

7 PLATO *Symposium* 167 d / *Phaedo* 224 225a 231c 232a / *Republic* BK VI VII 383d 398c / *Timaeus* 447b d / *Theaetetus* 534d 536a

8 ARISTOTLE *Posterior Analytics* BK I CH 31 120a c / *Topics* BK II CH 8 [114 17 26] 159d 160 / *Metaphysics* BK I CH I [980a20-b24] 499a / *Soul* BK II CH 5 647b 648d

9 ARISTOTLE *Generation of Animals* BK I CH 23 [731 3 b5] 271c d / *Ethics* BK I CH 4 [109 30-b12] 340c d BK VI CH 8 [1142 12 31] 391b c

17 PLOTINUS *Fifth Ennead* TR V CH I 3 228b 230 / *Sixth Ennead* TR III CH 8 291 b

18 AUGUSTINE *Confessions* BK I par 10 15b d BK XII par 5 100a b

19 AQUINAS *Summa Theologica* PART I Q A 4 ANS and REP 3 53b-54c Q 7 ANS 68d 70d Q 14 6 REP 1 80a 81 Q 54 2 N 285d 286c Q 57 A 1 2 295 d 2 295d 297a Q 78 A 4 ANS and REP 4-6 411d 413d Q 85 A REP 3 453d-455b

23 HOBBES *Leviathan* PART I 49d

28 HARVEY *On Animal Generation* 332a 333c

31 DESCARTES *Discourse* PART IV 53b / *Meditations* III 83d 84a VI 96b 103d / *Objections and Replies* 136d 137a 218c d 229d 230d

35 LOCKE *Human Understanding* BK III CH I SECT 5 252b c BK IV CH II SECT 14 312b d CH III SECT 2-5 313a c SECT 21 319c CH XI SECT 13 357d 358a

35 BERKELEY *Human Knowledge* INTRO SECT I 405a b SECT 18 416b c SECT 7 418a b SECT 135 142 440a 441c

35 HUME *Human Understanding* SECT V DIV 41 468a b

42 KANT *Pure Reason* 14a c 22a c 23a 24a 34a c 45d-46a 199a-c / *Judgement* 528c d 542b 543c 570b 572b esp 571c 572a

53 JAMES *Psychology* 144a 145a 167b 311b 312b [fn 1] 450a 451b 453a 459b esp 453a b 456a

4b The object of sense perception the evident particular fact judgments of perception and judgments of experience

7 PLATO *Phaedo* 224a 225a 231c 232a / *Republic* BK VI 383d 388a / *Timaeus* 447b-c 457d / *Theaetetus* 517b 536a / *Sophist* 568b

8 ARISTOTLE *Posterior Analytics* BK II CH 19 [99b20-100b5] 136a d / *Topics* BK II CH 8 [114 18 26] 159d 160a / *Physics* BK I CH 5 [188b26-189 9] 264b c / *Heavens* BK III CH 7 [3 6 1 18] 397b c / *Metaphysics* BK I CH I [981b10 13] 499d 500a BK IV CH 5 [1009b1 17] 528d 529a [1010b1 1011a2] 530a c BK XI CH 7 [1064 4-9] 592b / *Soul* BK II CH 5 [417b18 28] 648b c BK III CH II [433 16-22] 667a

9 ARISTOTLE *Ethics* BK I CH 7 [1098 34 b8] 343d 344a BK VI CH 8 [1142a23 31] 391b c

17 PLOTINUS *First Ennead* TR I CH 7 3d 4a / *Fourth Ennead* TR VI CH I 2 189b-190b

18 AUGUSTINE *Confessions* BK III par 10 15b-d BK IV par 15 17 23 d

19 AQUINAS *Summa Theologica* PART I Q 12 A 4 ANS and REP 3 53b 54c Q 14 A 11 ANS and REP 1 2 84c 85c A 12 ANS 85d 86d Q 17 A 3 102a d Q 18 A 2 ANS 105c 106b Q 57 A 1 REP 2 295a d A 2 ANS 295d 297a Q 59 A 1 REP 1 306c 307b Q 5 A 5 ANS 382a 383b Q 76 A 2 REP 4 388c 391 Q 77 A 5 REP 3 403d 404c Q 79 A 6 ANS 419b 420d Q 85 A 1 ANS 451c 453c A 6 ANS 458d-459c

20 AQUINAS *Summa Theologica* PART I II Q 5 A 3 REP 3 8b 9

23 HOBBES *Leviathan* PART I 49a d PART II 172b

28 HARVEY *On Animal Generation* 332a 333c

31 DESCARTES *Discourse* PART IV 53b / *Meditations* II 80c 81d VI 96b 103d passim / *Objections and Replies* 229d 230d

31 S INOZA *Eth cs* PART II PROP II 16 377b 380d
35 LOCKE *Human Understa ding* BK II CH IX S CT 8 10 139b 140b BK IV CH II SECT 14 312b d CH III SECT 2 313 SECT 5 313c SECT 14 316b d SECT 21 319c CH XI 354c 358c esp SECT 13 357d 358a
35 BERKELEY *Human Knowledge* SECT 18 416b c
42 KANT *Pure Reason* 16d 17d 108a d 115b c
43 MILL *Ut litar anism* 445d-446a
53 J 1 s *Psychology* 150b-151b 184b 185b 363b 364a 453a-457a 472b 479 502a 504 506a 507a 564a b 569b 570a 606b 610b esp 608b 609a 867a 868b esp 868 b
54 FREUD *U nscious* 430c / *Eg d Id* 702d 703a

4c The rel tion of sense and the s n ble the s bject vity or objecti ity of sense qual ties

7 PLATO *Th aetetu* 517b 520b
8 ARISTOTLE *C tegor es* CH 7 [7^b35-8 12] 12d 13a / *Phys cs* BK II CH 2 [244^b1 245 2] 328b-d CH 3 329a 330d / *Metaphys cs* BK IV CH 5 [10 ^{b}30-1011^a2] 530 / *Soul* BK II CH 5 647b 648d CH 1 [4 3^b27]-CH 12 [424^a-4] 655 656a BK I CH 2 657d 659 CH 4 [429^a10-29] 661b CH 8 664b d / *Sense and the Sensible* 673a 689a c / *Dr ams* CH 2 [459 3 46 32] 703 704b
9 ARIS OTLE *P ts of A imals* BK II CH 2 [648^b15 18] 173a / *Eth c* BK X H 4 [1174^b 5-1 75 3] 429a b
10 GALEN *Natu l Facult es* K I CH 2 167d
12 LUC ETIUS *Natur f Th gs* BK [730-864] 24b 26 [o] 27d 28a
19 AQU N *S mma Theologica* ART I Q 14 A 2 AN 76d 77d
20 AQU N S *Summa Theol gica* PART III SUPPL Q 8 A 3 ANS 971a 972d
23 H B S *Let tha* ART I 49a d 57b 59d PART III 172d
25 MONTAIGNE *E ays* 285b 292d passim
31 DESCARTE *Rule* X 19 / *Med tat s* VI 100 / *Obj ct ns a d Replie* 162d 165a 228c 229 231a b
34 NEWTON *Opti* BK I 428a b
35 L KE *H man U derstand g* K II H VIII 133b 138b passim CH XX CT 3 178d S CT 75 200b d H XX ECT 7 3 205d 208b CT 37 214a b I XXX CT 238b c CH XXXI S T 239b d CH XXXII S CT 14 6 245 246b K IV C I I CT I 14 311 312d H I I S CT 6 314b SE T II 14 315d 316d CT 28 322a c IV CT 4 324 H X E T 4-9 355b 357a
35 B RKE EY *Hum K wledge* E T -91 413a-431a esp CT 3 413 d CT 8 5 414 416a S T 48-49 422a b S CT 56-57 423 424 S CT 73 427b ECT 76- 8 427d 428b S CT 86-9 429c-431a SE T I 432d-433a

35 HUME *Human Understandi g* SECT XII DIV 117-123 504a 506a
42 KANT *Pure Reason* 23a 24 29d 33d esp 30d 31a 31d 32a 32d 33b [fn 1] 88b 89c 101b 102a 115b c / *Intro Metaphysic of Morals* 385a c
50 MARX *Cap tal* 31c d
53 JAMES *Psychology* 98b 105a 127b 128a 150a 151a 176b 177a 459a-479a esp 459a b 471b 473a 479a 851b 852a 860a b

4d The limit accuracy and reliab lity of sensit ve knowledge the fallibility of the senses

7 PLATO *Phaedo* 224a 225a 231 232a / *Republic* BK VI-VII 386d 398 / *Theaet t us* 534d 535c / *Statesman* 594d 595c
8 A I TOTLE *Posterior Analyt cs* BK I CH 31 120a / *Top cs* BK V CH 3 [13 ^{b} 9-36] 182b c / *Ge er tion a d Corrupt* BK I CH 3 [318^b 19 4] 415 / *Metaphysics* BK IV CH 5 [1010^b 15 29] 530b c / *Soul* K H CH 6 [418 6-18] 648d 649 K III CH 3 [427^b6-14] 659d 660a / *S e and the Sensibl* CH 4 [442^b4-9] 680a b
9 ARISTOTLE *Generat n of Animal* K I CH 23 [73 30-^{b}5] 271 d
12 LUCR TIU *N ture of Th ngs* K I [693 7] 9c BK IV [324-521] 48 51a esp [469-5 1] 50b 51
17 PLOTINUS *Second Enn ad* TR VIII 64 65c / *Fifth Ennead* TR V CH I 228b-229
18 AUGU N *City of God* BK XIX CH 18 523a b
19 AQU NA *Summa Th l gica* PART I Q 17 A 102a d Q 85 A 6 AN 458d 459c
21 DANTE *Di ine Com dy* PARAD II [46-57] 108b
25 MONTA GNE *E ays* 285c 292d
28 HARVEY *Ci cul tion of th Bl od* 320b 322d 323d 324c d / *On A imal Generat on* 332a 333
30 BACON *Advan ement of Learni g* 51c d 57d 58b / *N um Organum* K I APH I 107d APH 4 17 107d 108 A H 41 109 d APH 50 111b BK II APH 6 139b c APH 39 40 169d 173d A 44 175d
31 D S ARTES *R les* VIII 13a b XII 18c 22c 23 / *D c u se* PART IV 53b / *Meditat s* I 75a 77 83d 84 VI 96b 103d p 103 d / *Obj ct o a d Repl* POSTULATE I 130d 206 207a 229d 230d
31 S N A *Eth s* PART II PRO 16 CO OL 2 380d P O 4 28 383 384c P O 29 OROL 384d 385a P O 40 S HOL 2 PRO 41 388 c
32 M LTON *P ad se Lost* BK V [544-576] 187a b K VIII [14 130] 234b 235a
33 P L *Pens* 9 173b 83 188b 189
35 LOCK *Human U derst di g* K C XX I T II-3 206d 208b C I XXX T 2 238b CH XXX T 239b d C XX T 4 6 245c 246b K I C I SECT 14 312b-d H V T 4 324c X S CT 3-9 355 357

(4 The character of sensitive knowledge 4d The limit accuracy and reliability of sensitive knowledge the fallibility of the senses)

35 BERKELEY *Human Knowledge* INTRO SECT 1 405a b SECT 14 15 415c-416a SECT 27 418a b SECT 40 420b SECT 86-88 429c 430b SECT 101 432c d SECT 135 142 440a 441c passim
35 HUME *Human Understanding* SECT IV DIV 29 461a d SECT XII DIV 117 123 504a 506a
42 KANT *Pure Reason* 27b 33d esp 29d 30c 108a d esp 108d [fn 1] / *Practical Reason* 337a c / *Judgement* 603b-d
49 DARWIN *Origin of Species* 96c
53 JAMES *Psychology* 125a 126a 400a 405a 460a 471a esp 469a b 500a 544a 545b 589b 625a esp 589b 590a 593a 595a 606b 610b 625a
54 FREUD *Interpretation of Dreams* 383b-c

4d(1) The erroneous interpretation of sense data the problem of judgments based on sensation

7 PLATO *Republic* BK X 431c d / *Theaetetus* 538d 541a
8 ARISTOTLE *Generation and Corruption* BK I CH 3 [318b19-31] 415c d / *Metaphysics* BK IV CH 5 [1009b1 17] 528d 529a BK XI CH 6 [1062b34 1063 9] 591a b / *Soul* BK II CH 6 [418 14 18] 648d 649a BK III CH 1 [425 30-b3] 657c CH 3 [428b18-24] 661a / *Sense and the Sensible* CH 4 [442b4-9] 680a b
12 LUCRETIUS *Nature of Things* BK IV [324 468] 48c 50b [1149 1170] 59 b
19 AQUINAS *Summa Theologica* PART I Q 17 A 2 102a d Q 85 A 6 ANS 458d 459c
29 CERVANTES *Don Quixote* PART I 50b-52d
30 BACON *Advancement of Learning* 58b
31 DESCARTES *Rules* XII 22c 23a / *Meditations* III 83d 84a / *Objections and Replies* 229d 230d
35 LOCKE *Human Understanding* BK II CH XXXII SECT 19-26 247a 248b
35 HUME *Human Understanding* SECT XII DIV 117 504b c
42 KANT *Pure Reason* 108a d
44 BOSWELL *Johnson* 13 d
53 JAMES *Psychology* 111 460a-469a esp 462b-463b 468b-469a 508 568b 570a 589b 595a esp 589b-590 593a 595a 617a 625a esp 618b 620a

4d(2) Error in sense perception illusions and hallucination

7 PLATO *Theaetetus* 520c 522b
8 ARISTOTLE *Dreams* 702 706d
9 ARISTOTLE *Parts of Animals* BK I CH 2 [645b15 18] 173a
12 LUCRETIUS *Nature of Things* BK IV [324 336] 48c [722-748] 53d 54a
14 PLUTARCH *Marcus Brutus* 816d 817c
17 PLOTINUS *Second Ennead* TR VIII 64c 65c
19 AQUINAS *Summa Theologica* PART I Q 17 A 2 ANS 102a d Q 85 A 6 ANS 458d 459c Q 111 A 4 ANS 571b d
20 AQUINAS *Summa Theologica* PART III SUPPL Q 82 A 3 ANS 971a 972d
23 HOBBES *Leviathan* PART I 50d 52b PART III 172b d 174b 189d 190a PART IV 249d 258b d 261a
29 CERVANTES *Don Quixote* PART I 50b 52d
30 BACON *Novum Organum* BK I APH 50 111b / *New Atlantis* 213d
31 DESCARTES *Rules* XII 22c 23a / *Meditations* I 75c d VI 101d 102d
34 NEWTON *Optics* BK I 384b 385b 434a-435a 443a
35 LOCKE *Human Understanding* BK II CH XXIX SECT 3 234b-c
35 BERKELEY *Human Knowledge* SECT 14 415d
36 STERNE *Tristram Shandy* 234b 236b
44 BOSWELL *Johnson* 13c d
53 JAMES *Psychology* 132a 139a 248b-249b 264b 269a 462b 469a esp 462b 465a 468a 469a 475a-477b 508a 520a esp 508a 521a 522a 527a 538b 545a b 565a b 601a 606a 610b 625a 662a 663a [fn 1] 747b [fn 3] 780a 785a 786a 787b [fn 1] 842b 847b
54 FREUD *Origin and Development of Psycho-Analysis* 3a d / *Hysteria* 31b 38d passim esp 31b d 36b d 102a 106c esp 104d 105d / *Interpretation of Dreams* 148d 149 149d 150d 337a d 353d 356b esp 354c 355b 356a b / *General Introduction* 472a c / *Ego and Id* 700c

5 The contribution of the senses to scientific or philosophical knowledge

7 PLATO *Phaedo* 224a 225a 228a 230c / *Republic* BK VI VII 383d 398c / *Timaeus* 455b-c / *Theaetetus* 534d 536b / *Seventh Letter* 809c 810d
8 ARISTOTLE *Prior Analytics* BK I CH 30 [46 18-28] 64a / *Posterior Analytics* BK I CH 13 [78b31-79 16] 108b c CH 18 111b-c CH 31 120a c BK II CH 19 136a 137a c / *Physics* BK I CH 1 259a b CH 8 [191 24 34] 267a b / *Heavens* BK III CH 7 [306a6-18] 397b c / *Generation and Corruption* BK I CH 2 [316a5 14] 411c d / *Metaphysics* BK I CH 1 [980 20-982 1] 499 500b BK XI CH 7 [1064 4-9] 592b / *Soul* BK I CH 1 [402b11 403a2] 631d 63 a / *Sense and the Sensible* CH 1 [436 13 437a17] 673c 674a
9 ARISTOTLE *Parts of Animals* BK III CH 4 [666a7 10] 193d / *Generation of Animals* BK III CH 10 [760b28 32] 301d 302a / *Ethics* BK II CH 2 [1104 14 15] 349c
10 HIPPOCRATES *Ancient Medicine* par 8 3a 3b / *Aphorisms* SECT I par 1 131a
19 AQUINAS *Summa Theologica* PART I Q 1 A 9 ANS 8d 9c Q 84 AA 6-8 447c-451b Q 87 1 ANS 465a 466c Q 89 A 5 ANS 477a 478b Q 91 A 3 REP 1 3 486b-487d Q 9 A 1

REP 3 510b 511b PART I II Q 3 A 3 ANS 624b-625a
20 AQUINAS *Summa Theologica* PART I II Q 50 A 3 REP 3 8b 9a PART III Q 9 A 4 766b 767b Q 12 A 3 REP 2 778b 779a
23 HOBBES *Leviathan* PART I 54b c 60a b PART II 129a PART IV 267a b
25 MONTAIGNE *Essays* 260c 261c 285c 288a 291b 292d
28 GILBERT *Loadstone* PREF 1 b BK I 6a 7a K II 27b c
28 GALILEO *Two New Sciences* FIRST DAY 131a 138b passim
28 HARVEY *Motion of the Heart* 267b d 268d 280c / *Circulation of the Blood* 322d 323d 324c-d / *On Animal Generation* 331b 335c 411c d
30 BACON *Advancement of Learning* 5b c 16a 34b 44 50c 51d 57b d / *Novum Organum* 105a 195d esp BK I APH 64 114b APH 95-103 126b 128 BK II A H 38-43 169c 175
31 DESCARTES *Rules* II 2d 3a VII 10c 12a XII 22 23a 24a b XIV 28d 33b / *Discourse* PA T IV 53b P RT VI 61d 62c / *Meditations* I 75b 76c V 97a 103d / *Objections and Replies* 128d 129a 215b c 217 d 229d 230d
31 SPINOZA *Ethics* PART II PROP 40 SCHOL 2 388a b
34 NEWTON *Principles* K III RULE I I-IV 270b 271b / *Optics* BK III 543a b
34 HUYGENS *Light* CH I 553a
35 LOCKE *Human Understanding* K II CH I SECT 24 127b c H XXIII S CT 3 204 d SECT 6-7 205b 206a SECT 28 9 211b 212a SECT 32 37 212c 214b BK I I CH X CT I 23 304d 305b BK IV CH III SE T 14 316b d SE T 16 317a c SECT 25 29 321a 323a passim CH VI SECT 13 335 d CH XI SECT 9-13 360d 362d CH XVI CT 12 370b 371a
35 BERKELEY *Human Knowledge* SECT 30 418c SECT 58-59 424a b SECT I 4 433a b SECT 107 433d-434a
35 HUME *Human Understanding* S CT IV DIV 20-SE T V DIV 38 458a-466c p ssim CT V DIV 48 471b DIV 6 477 SECT VIII DIV 65 479b c S CT X DIV III 113 501b 502d esp D V 112 501 502a
42 KANT *Pure Reason* 5 13d 14a-c 15c 16 31b d 46a b 58a b 66d 67b 68a 69 85a b 86d 87b 94b 95 211 218d / *Fund Prin Metaphysic of Mo l* 253a 254d esp 253a c 254b-c 263b-c 273a b / *Practical Reason* 295b d 312 d 329d 330 331a 332d / *Intr Metaphysic of Moral* 387a b
43 MILL *Utilitarianism* 445b-447a passim 475b d [fn 1]
45 LAVOISIER *Elements of Chemistry* PREF 1c 2b 6d 7 PART 87b-c
45 FARADAY *Researches Electricity* 774d
46 HEGEL *Philosophy of Right* NTRO P r 3 10 11a / *Philosophy of History* INTRO 156 190b
51 TOLSTOY *War and Peace* EPILOGUE II 684a
53 JAMES *Psychology* 385a b 647b 648b 677b 851a 884b esp 860b 861a 862a 865a 867 884b
54 FREUD *Narcissism* 400d 401a / *Instincts* 412a b / *General Introduction* 545b d / *Ego and Id* 701d / *New Introductory Lectures* 815a 879c

5a Sensation as the source or occasion of ideas the role of memory or reminiscence the construction of complex ideas the abstraction of universal concepts

7 PLATO *Phaedo* 228a 230d / *Republic* BK VII 392b 393b / *Timaeus* 455a c / *Theaetetus* 538d 541a
8 ARISTOTLE *Posterior Analytics* BK I CH 31 120a c BK II CH 19 136a 137a c / *Metaphysics* K I CH I [980b10-981 13] 499a-c / *Soul* BK I CH [403a2 15] 632 b BK III C 7 [431 14]-CH 8 [432 14] 663d 664d / *Memory and Reminiscence* CH I [449b30 450a25] 690c 691a
19 AQUINAS *Summa Theologica* PART I Q 55 A 2 REP 2 289d 290d Q 75 A 2 REP 3 379c 380c A 3 REP 2 380 381b Q 79 AA 3-5 416a-419b Q 84 A 2 REP I 442b-443 A 6 447c-449 Q 85 A I 451c 453 PART Q 2 A 6 REP 2 619d 620d Q 29 A 6 AN 748b 749a
20 AQUINAS *Summa Theologica* PART I Q I A AN 777b 778b
21 DANTE *Divine Comedy* PARADISE IV [8 48] 111a
23 HOBBES *Leviathan* PART I 49a 52b c 54a c PART IV 262a b
28 GILBERT *Loadstone* BK V 105c
28 HARVEY *Circulation of the Blood* 305a / *On Animal Generation* 332 335c
31 DESCARTES *Rules* VI 13a 14b XII 18b / *Discourse* PART II 47 d PART IV 53b
35 LOCKE *Human Understanding* BK I H I S CT 15 98d 99a BK II CH I III 121a 129b esp CH I S CT 1-8 121a 123a SECT 20-25 126d 127d CH II SECT 2 128a b CH VII S CT 10 133 b CH IX SECT 15 141a CH X SECT 4-9 144d 145c CH XI SE T 15-CH XII SECT 2 146d 147d H XI S CT 8 148 d CH X SECT 2 149a S T 4-6 149b d ECT 27 154c d CH XIV S C 7 160d 161a S T 30-31 161 162 CH XVI T I 2 165 d SECT 5 166b c CH XV I S CT 3 168b CT 5 168d 169a CH XV CT 2 CH XV ECT I 173d 174 CH XV ECT 6 174 d CH XXI ECT 201 b S CT 9 202c 203a H XX I E T I 204 b S CT 3 204c d ECT 9 206b c SECT 15 208c d ECT 9 211d 212 CT 32-37 212c 214b H XXV CT 9 216d CT 217 CH XXX S C 3 238 d CH XXX I ECT 6-8 244b d CT 245b K CH I S T 5 252b-c CH II S CT 3 253 H SECT 6-9 255 256 CH V T I 14 262b 263a H VI S C 9 270d 271 CT 8 47 276a

(5 *The contribution of the senses to scientific or philosophical knowledge 5a Sensation as the source or occasion of ideas: the role of memory or reminiscence; the construction of complex ideas; the abstraction of universal concepts*)

282b esp SECT 46-47 281d-282b CH XI SECT 21-23 304d-305b BK II CH IV SECT II-12 326b-d

35 BERKELEY *Human Knowledge* INTRO SECT 6-16 405d-409d passim SECT I 413a-b

35 HUME *Human Understanding* SECT II 455b-457b esp DIV 13-14 455d-456b SECT VII DIV 49 471c-d

42 KANT *Pure Reason* 23a-24a 45b-46a / *Fund Prin Metaphysic of Morals* 281c-282c

45 LAVOISIER *Elements of Chemistry* PREF 1c-2a

53 JAMES *Psychology* 171b-175a 302b-327a 331b 405b-407a 455a-b 480a-484a 540a-635a esp 547a-550b 551b-552a 561a-b 584b 593a-595a 626a-628a 630b-631a 632b-635a 787a

54 FREUD *Interpretation of Dreams* 353d-354a 367c / *Unconscious* 442b-443d / *Ego and Id* 700a-701d

5b Sense experience as the origin of inductions

8 ARISTOTLE *Prior Analytics* BK I CH 30 [46ª18-28] 64a / *Posterior Analytics* BK I CH 18 111b-c BK II CH 2 [90ª24-30] 123b-c CH 19 136a-137a / *Physics* BK I CH 8 [191ª24-34] 267a-b / *Generation and Corruption* BK I CH 2 [316ª5-14] 411c-d / *Metaphysics* BK I CH I 499a-500b / *Soul* BK I CH I [402ᵇ11-403ª2] 631d-632a

9 ARISTOTLE *Ethics* BK I CH 7 [1098ª34-ᵇ8] 343d-344a BK VI CH 8 [1142ª12-31] 391b-c CH 11 [1143ª25-ᵇ5] 392d-393a

20 AQUINAS *Summa Theologica* PART I-II Q 51 A I ANS 12b-13c

28 HARVEY *Motion of the Heart* 273c-d / *Circulation of the Blood* 322d-323d 324c-d / *On Animal Generation* 332a-335c esp 334c-d 473a

30 BACON *Advancement of Learning* 16a 34b 43d-44c / *Novum Organum* BK I APH I 7 107d-108 APH 19 108b APH 22 108c BK II APH 38-43 169c-175c

31 DESCARTES *Rules* VII 10c-12a XIV 28a-b / *Discourse* PART 61d-62c / *Objections and Replies* 167c-d

31 SPINOZA *Ethics* PART II PROP 40, SCHOL 1-2 387b-388b

34 NEWTON *Principles* BK III RULE III-IV 270b-271b

35 BERKELEY *Human Knowledge* SECT 107 433d-434a

35 HUME *Human Understanding* SECT III DIV 19 458a

38 ROUSSEAU *Inequality* 341c-342b

45 FARADAY *Researches in Electricity* 659a

46 HEGEL *Philosophy of History* PART I 361a-b

53 JAMES *Psychology* 862a-865a

54 FREUD *Instincts* 412a

5c The dependence of understanding or reason upon sense for knowledge of particulars: verification by appeal to the senses

7 PLATO *Republic* BK IX 421a-422b

8 ARISTOTLE *Physics* BK I CH 8 [191ª24-34] 267a-b BK VII CH 3 [247ᵇ1-7] 330b / *Heavens* BK I CH 3 [270ᵇ1-13] 361c-d BK III CH 7 [306ª1-18] 397b-c / *Generation and Corruption* BK I CH 2 [316ª5-14] 411c-d / *Soul* BK I CH I [402ᵇ11-403ª2] 631d-632a BK III CH 8 [432ª2-9] 664c

9 ARISTOTLE *Motion of Animals* CH I [698ª10-15] 233a / *Generation of Animals* BK III CH 10 [760ᵇ28-32] 301d-302a / *Ethics* BK II CH 7 [1107ª27-32] 352d-353a CH 9 [1109ᵇ20-23] 355c BK X CH I [1172ª34-ᵇ7] 426b CH 8 [1179ª17-22] 433d-434a / *Politics* BK VII CH I [1323ª33-ᵇ7] 527b

10 GALEN *Natural Faculties* BK III CH 2 199d

12 LUCRETIUS *Nature of Things* BK I [418-445] 6b-c [690-704] 9c BK IV [469-521] 50b-51a

18 AUGUSTINE *City of God* BK VIII CH 7 269c-d

19 AQUINAS *Summa Theologica* PART I Q 14 A I 84c-85c Q 32 A I REP 2 175d-178a Q 5 2 295d-297a Q 84 AA 7-8 449b-451b Q 86 A I 461c-462a

23 HOBBES *Leviathan* PART I 85d PART II 165a PART IV 49b 250a

25 MONTAIGNE *Essays* 260c-261c 285c-286a 287b-291b 292d

28 GALILEO *Two New Sciences* THIRD DAY 200a-b

28 HARVEY *Motion of the Heart* 268d-273c 286b-c 295d-296a / *Circulation of the Blood* 322d-323d 324c-d / *On Animal Generation* 331b-335c 357b

30 BACON *Advancement of Learning* 57d-58b / *Novum Organum* BK I APH 50 111b APH 0 116b-117a BK II 137a 195d passim

31 DESCARTES *Discourse* PART VI 61d-62c 66a-b / *Meditations* I 75a-77c / *Objections and Replies* 229d-230d

34 NEWTON *Principles* BK III RULE III-IV 270b-271b

35 LOCKE *Human Understanding* BK II CH IV SECT 6 131a BK IV CH XI SECT 13 362c-d

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Chapter 85 SIGN AND SYMBOL

INTRODUCTION

A SIGN points to something A symbol stands for or takes the place of another thing Sign and symbol are sometimes differentiated according to whether emphasis is placed on that which is signified or pointed out or on that which functions as a surrogate or substitute

Yet sign and symbol are often used interchangeably We call the notations of music or mathematics either signs or symbols Words too are traditionally spoken of as signs or symbols Words and other conventional notations for expressing meaning both point to and stand for something else It is only in certain cases that one of these two functions seems to predominate as the road marker points out the direction to take and paper money takes the place of the precious metal whose value it represents

On what is common to signs and symbols of all sorts there seems to be no disagreement throughout the tradition of western thought From Augustine s statement that a sign is a thing which over and above the impression it makes on the senses causes something else to come into mind as a consequence of itself to Freud s analysis of the symbolism of dreams of symptom and symptomatic acts the great books consider sign or symbol as one term in a relation the relation being one of meaning or as Freud says of significance intention tendency The fundamental problems traditionally discussed concern the nature of meaning itself and the modes of signification which vary with the kinds of things that function as signs and the kinds of things they signify

WITH RESPECT TO THINGS which function symbolically the primary distinction seems to be that between natural and conventional signs Augustine at first suggests a threefold division Some things are simply things and not signs at all Some (for example the ram which Abraham offered up instead of his son) are not only things but also signs of other things And some things such as words are never employed except as signs Augustine adds that words are not merely signs Every sign he writes is also a thing for what is not a thing is nothing at all

The distinction between natural and conventional signs falls within this threefold division Natural signs Augustine says are those which apart from any intention or desire of using them as signs do yet lead to the knowledge of something else as for example smoke when it indicates fire For it is not from any intention of making it a sign that it is so but through attention to experience we come to know that fire is beneath even when nothing but smoke can be seen And the footprint of an animal passing by belongs to this class of signs

Augustine seems to find natural signs in things that are related as cause and effect Berkeley on the other hand tends to substitute the relation of sign and thing signified for the relation of cause and effect The fire which I see he writes is not the cause of the pain I suffer upon my approaching but the mark that forewarns me In like manner the noise that I hear is not the effect of this or that motion or collision of the ambient bodies but the sign thereof

Every natural thing or event thus tends to become the sign of something else so that the whole of nature constitutes a vast symbolism or language by which God informs us of his plan Aristotle tends in the opposite direction to limit natural signs to those things which according to our knowledge and experience permit a necessary or probable inference to something else The fact that a woman is giving milk

he regards as an infallible sign that she has lately borne a child the fact that a man is breathing fast is merely a probable and refutable sign that he has a fever

In any case signs are generally acknowledged to be natural if they satisfy Augustine s criterion that they were not intentionally devised by men for the purpose of signifying Conventional signs on the other hand he writes are those which living beings mutually exchange for the purpose of showing as well as they can the feelings of their minds or their perceptions or their thoughts Of conventional signs Augustine goes on to say words hold the chief place because everything which can be expressed by gestures or by such non verbal symbol as flags or bugle calls can also be expressed in words whereas many thoughts which words readily express do not lend themselves easily to other modes of expression

Except for the hypothesis (discussed in the chapter on LANGUAGE) of a natural form of speech common to all men and consisting of words perfectly adapted to the objects they name it is never proposed that words are any thing but conventional signs As Aristotle says nothing is by nature a noun or a name—it is only so when it becomes a symbol The audible sound or the visible mark becomes a symbol only by human institution or convention

Yet not all the audible sounds which men and other animals make to express their feelings or desires are in Aristotle s opinion to be regarded as words Inarticulate sounds such as those which brutes produce are significant yet none of these constitutes a noun Nor are such cries whereby one animal calls another or communicates fear or anger strictly conventional signs for as Augustine points out they are instinctive modes of expression and so are natural rather than conventional They are not voluntarily instituted

IN TERMS OF THE ancient distinction between the conventional and the natural—that which changes from time to time and place to place and that which is everywhere and always the same—no one would question the conventionality of words and of all other non verbal symbols which are peculiar to one people one culture or one epoch That words are conventional signs raises the central problem concerning their meaning or significance Utterly dissimilar words in different languages can have the same meaning and identical sounds or marks in different languages can mean quite different things Since the sounds or marks which constitute spoken and written words do not possess meaning naturally from what source do such conventional signs get the meanings they have?

The usual answer given by Aristotle Locke and others is that words get their meanings from the ideas thoughts or feelings which men use them to express Spoken words writes Aristotle are the symbols of mental experience and written words are the symbols of spoken words Just as all men do not have the same writing so all men do not have the same speech sounds but the mental experiences which these directly symbolize are the same for all as also are those things of which our experiences are the images

In addition to being able to make articulate sounds it was necessary for man Locke says to be able to use these sounds as signs of internal conceptions and to make them stand as marks for the ideas within his own mind whereby they might be made known to others Thus words came to be used by men as the signs of their ideas not by any natural connexion that there is between particular articulate sounds and certain ideas for then there would be but one language amongst all men but by a voluntary imposition whereby such a word is made arbitrarily the mark of such an idea The use then of words is to be sensible marks of ideas and the ideas they stand for are their proper and immediate signification

Locke goes further Not only does the immediate signification of words i e in the ideas they stand for but in his view words can be signs of nothing else Yet he also considers the fact that men because they would not be thought to talk barely of their own imaginations but of things as they really are often suppose their words to stand also for the reality of things Locke thinks nevertheless that obscurity and confusion enter into the signification of words whenever we make them stand for anything but those ideas we have in our own mind

But though the meaning of a word may come from the idea it signifies the word which is thus made meaningful seems in the common usage of mankind to serve as the name or designation of some real thing It refers to something other than ideas or concepts in the human mind Locke himself talks of the application of names to things and in his consideration of the distinction between proper and common names is concerned to point out that though they differ in meaning (i e differ in the type of idea they signify) both refer to the same sort of reality—individual existences Aristotle and other writers who distinguish between things in the order of nature and the concepts we form of them tend to take both views of the significance of words Words signify the real things which they name as well as the ideas whose meanings they express If we waive for the moment the possibility that some words may signify *only* ideas whereas others signify both ideas and things two questions may be asked Are there any words which signify things alone? What is the relation between the idea and the thing a word signifies when a word signifies them both that is when a word has both sorts of significance how are they related to one another?

Aquinas answers the second question by saying that since words are the signs of ideas and ideas the similitudes of things it is evident that words function in the signification of things through the conceptions of the intellect Ideas may be the immediate or proximate object which words signify but through them words ultimately signify the real things which are themselves the objects of ideas According to this theory an idea may be both the *object signified* by a word and the *medium through which* that word also signifies the thing of which we have the idea Aquinas seems to think that ideas are always required as the medium whereby words signify things We can give a name to anything he says only insofar as we can understand it Accordingly it is impossible for words to signify things directly i e without the mediation of ideas

THIS POSITION HAS A number of consequences for the theory of signs and raises a number of issues. Augustine statement that every sign is also a thing has a different meaning when it is said of the sensible things which also happen to be signs and of the things of the mind—concepts or ideas—which cannot *be* without *being signs* The understanding of this difference helps to explain the relation between verbal signs and the mental signs through which they signify or from which they get their meanings

Whereas words are in the first instance meaningless marks and sounds which get meaning when men use them to express their thoughts or feelings ideas and images are at once meaningful however they arise in the mind They are natural signs in the sense that it seems to be their very nature to signify They do not get meaning They do not even have meaning in the way in which smoke as a natural sign of fire has a meaning which is distinct from though a consequence of its nature as smoke An idea *is* a meaning an intention of the mind as it is sometimes called a reference to an object thought about The idea of fire is the meaning the word fire has when it designates the natural phenomenon which that word is conventionally used to name and as Aristotle suggests the conventional signs of different languages [e g fire and *feuer*]—have the same meaning because the idea of fire is the same and the natural phenomenon experienced and thought about is the same for men of diverse tongues

That ideas or mental images are themselves meanings or intentions—the symbols of things thought about—seems to be recognized in different ways by many writers in the tradition of the great books In the *Cratylus* Socrates suggests that signs should be like the things they signify Some conventional signs he thinks are better than others in this respect He implies that all words are inferior to mental images which by their very nature imitate or resemble their objects

The act of memory according to Aristotle requires a memory image which is something like an impression or picture of the thing remembered If the memory image through its resemblance to something once experienced did not function as the sign of that absent thing memory would not be memory for Aristotle argues it would consist in beholding

the memory image itself which is present rather than the absent thing it stands for

Aquinas perhaps is the writer most explicit in his treatment of images and ideas as in their very nature meanings or intentions of the mind His calling them mental words seems to indicate that in his view they like physical and sensible words are signs but the added qualification of mental also implies their difference The vocal sound which has no signification he writes cannot be called a word wherefore the exterior vocal sound is called a word from the fact that it signifies the interior concept of the mind It follows that first and chiefly the interior concept of the mind is called a word The mental word or concept suffices when the mind turns to the actual consideration of what it knows habitually for then he adds a person speaks to himself But unlike angels who can make their concepts known to one another immediately men require the medium of external speech They must use sensible physical signs to communicate their thoughts

Without referring to ideas as mental words Locke does appear to identify ideas with meanings and to regard them as signs The definition of a word he says is an attempt to make known the meaning or idea it stands for Denying that the general and the universal belong to the real existence of things he holds that they "concern only signs whether words or ideas Words are general when used for signs of general ideas and ideas are general when they set up as the representatives of many particular things but universality belongs not to things themselves which are all of them particular in their existence even those words and ideas which in their signification are general

The basic issue to which Locke is addressing himself is discussed in the chapter on UNIVERSAL AND PARTICULAR. Locke s solution seems to involve the affirmation of abstract ideas which are general or universal in their significance and through which common names come to have a different sort of meaning from the meaning of proper names Ideas become general by separating them from the circumstances of time and place and any other ideas that may determine them to this or that particular existence Common nouns like man or cat become general in their significance according to Locke by being made the signs of general ideas

To the question of what kind of signification it is that general words have Locke replies As it is evident that they do not signify barely one particular thing for then they would not be general terms but proper names so on the other side it is as evident they do not signify a plurality for man and men would then signify the same That then which general words signify Locke declares is a sort of thing and each of them does that by being a sign of an abstract idea in the mind

It seems to follow therefore that those who like Hobbes and Berkeley deny the existence of abstract ideas or universal concepts must offer a different explanation of the meaning of common nouns or general names There being nothing in the world universal but names Hobbes writes a name is universal when it is imposed on many things for their similitude in some quality or other accident and whereas a proper name bringeth to mind one thing only a universal recalls any one of those many

On similar grounds Berkeley criticizes Locke s theory of how words acquire general significance His own theory is that words become general by being made the sign not of an abstract general idea but of several particular ideas any one of which it indifferently suggests to the mind And in another place he says that an idea which considered in itself is particular becomes general by being made to represent or stand for all other particular ideas of the same sort He does not himself explain how we come by the notion of the same sort or how one particular idea can represent the sort to which other particular ideas belong But he rejects Locke s explanation because it involves ideas which are not only general but also abstract

The attempt to account for the meaning of general names is in Berkeley s view the cause of Locke s acceptance of abstract ideas If there had been no such thing as speech or universal signs he writes there never [would have] been any thought of abstraction Not only do men mistakenly suppose that every name has or ought to have one only precise and settled signification which inclines [them]

to think there are certain abstract determinate ideas that constitute the true and only immediate signification of each general name but they also suppose that it is by the mediation of these abstract ideas that a general name comes to signify any particular thing Whereas in truth Berkeley concludes there is no such thing as one precise and definite signification annexed to any general name Where Locke would say that a common name gets its general meaning by signifying one idea which itself has general significance Berkeley reiterates that a general name gets its meaning from a great number of particular ideas all of which it signifies indifferently

THE RELATION OF WORDS to ideas raises still other problems in the theory of signs problems which have peculiar interest in the tradition of the liberal arts One of these problems has already been mentioned It is the question whether some words signify ideas alone in contrast to words which signify ideas and through them things This suggests the parallel problem of words which signify words in contrast to words which are the names of things

In his little tract *Concerning the Teacher* Augustine points out that some words such as noun and adjective signify kinds of words just as other words such as man and stone signify kinds of things Furthermore in the sentence man is a noun the word man signifies itself as the object referred to whereas in the sentence man is an animal the word man signifies a living organism of a certain sort The same word therefore may signify both itself and some thing other than itself

These differences which Augustine observes in the signification of words come to be formulated in the traditional distinction between the first and second imposition of words A word is used in the first imposition when it is used to signify things which are not words as for example the word man when it refers to a human being A word is used in the second imposition when it is applied to word rather than things as for example the word noun said of man or the word man when it is used to refer to itself in the sentence man is a noun

A parallel distinction is that between words used in the first and the second intention When the word man is used to signify a living organism of a certain sort it is used in the first intention because it signifies a reality not an idea A word is said to be used in the second intention when it signifies an idea rather than a thing For example in the sentence man is a species the word species signifies a logical classification and so is in the second intention and the word man is also in the second intention because it refers to the idea which is denominated a species

In some cases an idea may not *signify things* at all but only other ideas such as the logical notions of *genus* and *species* Words like genus and species unlike the words man and stone can therefore be used only in the second intention The idea *man* is called a first intention of the mind because its primary function is to signify the living thing Only secondarily does it signify itself as an object able to be considered The idea *species* on the other hand is called a second intention because its sole function is to signify ideas which stand to other ideas in a certain relation

Hobbes concisely summarizes most of these points when he points out that some words are the names of the things conceived whereas others are the names of the imaginations themselves that is to say of those ideas or mental images we have of all the things we see and remember And others again are names of names as universal plural singular are the names of names The names which we apply to particular species and genera such as man and animal Aquinas says "signify the common natures themselves but not the intentions of these common natures which are signified by the terms *genus* or *species*

ANOTHER TRADITIONAL distinction in the modes of signification is that between intrinsic and extrinsic denomination A name is said to be an intrinsic denomination when it is applied to a thing in order to signify its nature or its inherent properties and attributes as for example when we call a thing animal or rational white or square A name is said to be an extrinsic denomination when it is applied to a thing only in order to signify some relation in which that thing stands to some-

thing else as for example when we call sun shine healthy because it helps to produce healthy organisms or when we apply the names of animals such as pig or fox to men be cause we think the men bear certain resem blances to these animals The same word can be used in different connections both as an intrin sic and as an extrinsic denomination Healthy means an inherent quality when it is applied to living organisms and a causal relation to or ganic health when it is applied to sunshine pig means a certain kind of animal when it is applied to the four footed mammal and only a resemblance to this animal in certain charac teristics when it is applied to men

This double use of the same word exemplifies what is traditionally called equivocal speech or the equivocal use of a name Some writers tend to identify equivocation with amb guity on the ground that both involve a multiplicity of meanings for the same word Others seem to think that a word is used ambiguously only if its user is indefinite as to which of its several meanings he intends to express but they hold that a word can be used equivocally without ambigu ty if its user makes plain that he is employing it now in this sense now in that

Aristotle says that two things are named equivocally when though they have the same name the definit on corresponding with the name d ffers for each and on the other hand things are said to be named univocally which have both the name and the definition an swering to the name in common When we call a man and a pig an animal we are using that word univocally because we are using it with the same definition or mean ng in both cases but when we call a p g and a man a pig we are using that word equivocally because we are using it with d fferent meanings s gnify ng *having the nature of a pig* in one instance and *being l ke a p g in certain respects* in the other

Aristotle distinguishes several types of equiv ocation of which we have already noted two The use of the word healthy to describe an animal and sunshine is that type of equivoca tion n which the same word is used to name an inherent ttribute and also a cause of that attribute In other instances of the same type it might be used to name the nature or attri but and the effect rath than the cause Speaking of a man and a pig as a pig repre sents the metaphorical type of equivocation in which the same word is used to name the nature of a thing and something else of a dif ferent nature which has only a likeness to that nature

Metaphors in turn can be divided into types Some are based on a direct sim litude bet veen two things in some accidental respect *e g* the man who is like a pig in manner of eating Some Aristotle says are based on anal ogies or proportions as for example when we call a king the father of his people Here the metaphor is based on the similarity of the re lationship of a king to his subjects and of a father to his children The name father is used metaphorically when it is transferred from one term in this proportion to the term which stands in an analogous position

A third kind of metaphor accord ng to Aris totle cons sts in the use of the same word now in a more generic now in a more specific sense or with broader and narrower meanings Of this he gives an example in the *Ethics* when he discusses general and special justice using the word justice narrowly to s gnify one of the special virtues and broadly to mean all the vir tues considered in their social aspect There is a sense of the word justice he writes in which it signifies not part of virtue but virtue en tire this form of just ce is complete virtue thou h not absolutely but only in relat on to our neighbor The word injustice is also used in a correspondingly wide sense But there is another kind of injustice which is a part of injustice in the wide sense This particular injustice Aristotle says shares the name and nature of the first because its definition falls within the same genus As Aristotle treats this type of equ vocation n the *Rh toric* and the *Poetics* it includes three poss biliti s the trans fer of the name of a genus to one of its spec es the transfer of the name of a species to its genus and the transfer of the name of one spe c es to another in the same genu

It may be questioned wh ther this type of equivocation is properly class fied as metapl o ical on A stotl s o vn defin t on of metaphor as g ving a th g a n m that b lo gs to some thing lse In th type of equivocation exem pl fied by th use of the word justice now

with a generic and now a specific meaning the name does not seem to belong to the genus any more than it does to the species or conversely In contrast when the name father is given to a king in relation to his people the usage is metaphorical because the name father belongs to something else *i e* the man who is a progenitor

The same point can be made in terms of intrinsic and extrinsic denomination When justice is used as the name for the whole of virtue (regarded socially) and also for one particular virtue the word is an intrinsic denomination in both instances In all other types of equivocation the equivocal word is used once as an intrinsic and once as an extrinsic denomination for example as applied to the animal the word pig is an intrinsic denomination but it is an extrinsic denomination when it is applied to a man in order to signify a certain resemblance to the animal to which the name belongs The same is true in the case of the word healthy as said of an animal and of sunshine

In all these cases of equivocation the two meanings of the same word are not totally distinct On the contrary the two senses have something in common One of the meanings seems to be derived from the other one appears to be secondary (usually the one involved in the extrinsic denomination) and the other primary What is traditionally called equivocation by chance in contrast to equivocation by intention is the extreme case in which the same word is used in two utterly distinct senses having no common element of meaning at all *e g* the word pen used for a writing instrument and an enclosure for animals Equivocation by intention in which the different meanings of a word have something in common thus appears to be intermediate between equivocation by chance (in which the meanings share no common element) and univocal usage (in which the meaning is exactly the same each time the word is used)

In the *Physics* Aristotle seems to discover still another type of equivocation A pen a wine and the highest note in a scale are not commensurable he writes We cannot say whether any one of them is sharper than any other because it is only equivocally that the same term sharp is applied to them This does not seem to be equivocation by chance for the word sharp seems to have some common meaning as applied to the three objects which affect the diverse senses of touch taste and hearing nor is it like all other cases of equivocation by intention in that no one of these three meanings of sharp seems to be primary and the others derived from it Furthermore in all three meanings the word sharp is used as an intrinsic denomination

In the *Metaphysics* Aristotle also considers the special pattern of meaning which words like being or one have when they are applied to such heterogeneous things as substances quantities qualities etc He refers to these words as ambiguous or equivocal comparing them with the word healthy as said of an animal and of other things which either cause health or are effects of health It may be questioned however whether being is equivocal in the same way that healthy is since it always carries the significance of an intrinsic never of an extrinsic denomination Being as said of heterogeneous things seems to be more like sharp said of diverse sensible qualities—having a meaning which remains somehow the same while it is diversified in each case according to the diversity of the objects to which it applies

THESE CONSIDERATIONS of the univocal and the equivocal sign along with the treatment of ambiguity and intrinsic and extrinsic denomination indicate the extent and manner in which the great books anticipate the kind of analysis which in our time has come to be called semantics The chapter on LANGUAGE gives further evidence of the fact that many of the points and distinctions made in contemporary semantics have a long history in the tradition of the liberal arts Furthermore as the chapter on LANGUAGE indicates contemporary semantics cannot even claim novelty for its great interest in freeing men from the tyranny of words or in serving as a critical instrument to cut through the vicious abstractions of metaphysics Hobbes and Locke frequently dismiss theories not on the ground that they are false but rather because they think that the statement of them consists in so many meaningless words

In the tradition of the great books the anal ysis of words and their modes of signification seems to be motivated by other interests as well as these The distinction between the univ ocal and the equivocal sign for example is considered in its bearing on the logical problems of definition and demonstration as well as for the sake of proposing remedies to safe guard discourse against ambiguity It is also brought to bear upon the theological problem of the meaning of the names men apply to God and on the way in which they interpret the words of Sacred Scripture

The problem of the names of God is dis cussed in the chapter on SAME AND OTHER in terms of the kind of likeness which can obtain between an infinite being and finite creatures As there appears Aquinas takes the position that God and creatures are neither the same in any respect nor are they in all respects so di verse as to be utterly incomparable Though an infinite and a finite being are in his view in commensurable yet they can also have some sort of similitude—not an unqualified same ness but the kind of similarity which can be described as an intrinsically diversified same ness

Aquinas holds therefore that no names can be applied to God and creatures univocally for no name belongs to God in the same sense that it belongs to creatures Nor he goes on are names applied to God and creatures in a purely equivocal sense for it would follow then that from creatures nothing at all could be known or demonstrated about God which supposition Aquinas denies Between these two extremes of the simply univocal and the purely equivocal he finds a middle ground in a type of signification which he calls analogical The meaning of an analogical name he says is not as it is in univocals one and the same *yet it is* not totally diverse as in equivocals

What he means by pure equivocation seems to be what earlier writers call equivoca tion by chance and what he means by the analogical seems to correspond to what they call equivocation by intention Univocal names have absolutely the same meaning he writes while equivocal names have absolutely d verse meanings whereas in analog cals a name taken in one signification must be placed in the definition of the same name taken in other significations as for instance being which is applied to *substance* is placed in the definition of being as applied to *accident* and healthy applied to *animal* is placed in the definition of healthy as applied to *urine* and *medicine*

But as we have seen there are many types of equivocation by intention—the attributive based on cause and effect as exemplified by the word healthy that involving broader and narrower meanings exemplified by the word justice metaphors of the sort exempli fied by calling a man pig and of the sort based on analogies when we speak of a king as the father of his people and finally the very special type of equivocation found in sharp applied to a tone a taste and a touch

If Aquinas places the kind of signification he calls analogical in the general area of equiv ocation by intention it may be asked whether the various names of God are all analogical *in the same way* The answer seems to be negative for he distinguishes those names which have only a metaphorical sense when said of God such as angry or jealous and he denies the opinion of those who say that God is called good only in an attributive sense *i e* sig nifying him to be the cause of the goodness found in creatures On the contrary he thinks that words like good and wise and es pecially the name being are to be inter preted as intrinsic denominations when applied to both God and creatures

For Aquinas as for Aristotle that would appear to make the pattern of meaning exhib ited by the word sharp the model for the significance of being rather than that found in the merely attributive equivocation of the *word healthy —whether being is sa d of* substance and accidents or of God and crea tures The point seems to be unaffected by the fact that Aquinas calls this type of si nifica tion analogical whereas Aristotle always re fers to being as equivocal. Aristotle never treats any type of equivocation as analogical except the metaphor which results f om trans f rring the name of one t rm n a p oportion to anothe term standing in the same or a similar relationship

THE DISTINCTION BETWEEN literal and figurative or metaphorical speech seems to be of prime importance in the theologian s rules for interpreting the word of God As indicated in the chapter on RELIGION Augustine insists that the language of Holy Writ must be read in many senses Aquinas distinguishes a basic literal sense from three modes of spiritual meaning That signification whereby words signify things belongs to the first sense the historical or literal That signification whereby things signified by words have themselves also a signification is called the spiritual sense which is based on the literal and presupposes it The spiritual sense Aquinas divides into the allegorical the moral and the analogical

To grasp the various spiritual meanings the reader must understand that in Holy Scripture divine things are metaphorically described by means of sensible things As in the symbolism of the sacraments physical things serve as the outward and visible signs of an inward and spiritual grace so also in Holy Scripture spiritual truths are fittingly taught under the likeness of material things

A theologian like Aquinas thus justifies metaphors not only in Scripture but also in sacred doctrine or theology as both necessary and useful whereas in his view the poet s employment of them is solely for the sake of pleasure Philosophers and scientists on the other hand often take the opposite view—that metaphors have a place only in poetry and should be avoided in the exposition of knowledge

In the writing of poetry the command of metaphor says Aristotle is the mark of genius but all his rules for the construction of scientific definitions and demonstrations require the avoidance of metaphors as of all other forms of equivocation So too Hobbes inveighs against metaphors and figures of speech giving as one of the main causes of absurdity in science the use of metaphors tropes and other rhetorical figures instead of words proper for though it be lawful to say (for example) in common speech *the way goeth or leadeth hither or thither the Proverb says this or that* (whereas ways cannot go nor Proverbs speak) yet in reckoning and seeking of truth such speeches are not to be admitted

Darwin looks forward to the day when the terms used by naturalists of affinity relationship community of type paternity morphology adaptive characters rudimentary and aborted organs and so forth will cease to be metaphorical and will have a plain signification Freud on the other hand aware of how pervasive symbolism is in all the works of man normal and neurotic dreaming and awake seems to be reconciled to the inevitability of metaphors in scientific discourse The difficulty we meet with in picturing certain psychological processes he writes comes from our being obliged to operate with scientific terms *i e* with the metaphorical expressions peculiar to psychology Otherwise we should not be able to describe the corresponding processes at all nor in fact even to have remarked them The shortcomings of our description would disappear if for the psychological terms we could substitute physiological or chemical ones These too only constitute a metaphorical language but one familiar to us for a much longer time and perhaps also simpler

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in 4 HOMER *Iliad* BK II [265 283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the passage is in section d of page 12

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lower halves of the page For example in 53 JAMES *Psychology* 116a 119b the passage begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the page For example in 7 PLATO *Symposium* 163b 164c the passage begins in the lower half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One or more of the main divisions of a work (such as PART BK CH SECT) are sometimes included in the reference line numbers in brackets are given in certain cases e g *Iliad* BK II [265 283] 12d

BIBLE REFERENCES The references are to book chapter and verse When the King James and Douay versions differ in title of books or in the numbering of chapters or verses the King James version is cited first and the Douay indicated by a (*D*) follows e g OLD TESTAMENT *Nehemiah* 7 45—(*D*) *II Esdras* 7 46

SYMBOL The abbreviation esp calls the reader s attention to one or more especially relevant parts of a whole reference passim signifies that the topic is discussed intermittently rather than continuously in the work or passage cited

For additional information concerning the style of the references see the Explanation of Reference Style for general guidance in the use of *The Great Ideas* consult the Preface.

1 The theory of signs

1a The distinction between natural and conventional signs

OLD TESTAMENT *Genesis* 2 9-20 11 1-9

6 HERODOTUS *History* BK II 49a c

7 PLATO *Cratylus* 85a 114a

8 ARISTOTLE *Interpretation* CH 1 [16 4-9] 25a

11 NICOMACHUS *Arithmetic* BK II 832a

18 AUGUSTINE *Christian Doctrine* BK [illegible] 2 624d 625a BK II [illegible] 2 636b d 637c

19 AQUINAS *Summa Theologica* PART I Q 34 A [illegible] 185b 187b

20 AQUINAS *Summa Theologica* PART II Q 60 A 4 REP 849 850b

30 BACON *Advancement of Learning* 62c 63a

31 DESCARTES *Discourse* PART V 59c 60b

38 ROUSSEAU *Inequality* 342a b

46 HEGEL *Philosophy of History* PART I 252 d [illegible] 259c d

1b The intention of the mind ideas and images as natural signs

8 ARISTOTLE *Interpretation* CH 1 [16 4 9] 25a / *Soul* BK [illegible] 8 664b d / *Memory and Reminiscence* CH 1 [45 25 451 9] 691a 692b

17 PLOTINUS *Fourth Ennead* TR [illegible] 3 8a

18 AUGUSTINE *Christian Doctrine* BK I, CH 13 627d

19 AQUINAS *Summa Theologica* PART I Q 13, A 1 ANS 62c 63c A 4 65c 66b Q 14 A 5 ANS and REP 3 75d 76c A 2 ANS and REP 2 3 76d 77d Q 27 A 1 ANS 153b 154b A 2 A 1 and REP 2 154c 155b A 3 ANS 155c 156a A 4 ANS and REP 2 156b d Q 34 A 1 185b 18 b Q 37 A 1 AN 197c 199a Q 107 A 1 549b-550b PART I II Q 22 A 2 ANS 721c 722c

20 AQUINAS *Summa Theologica* PART I II Q 93 A 1 REP 2 215b d 216c

31 DESCARTES *Meditations* III 81d 89a passim / *Objections and Replies* DEF III IV 130b AXIOM V 132a [illegible] OP 1 132c

31 SPINOZA *Ethics* PART II DEF 3 373b P OP 5 374 d

35 LOCKE *Human Understanding* BK II CH XXX, SECT 2 238b c CH XXXII SECT 8 244d SECT 4 16 245c 246b BK IV CH II SECT 14 312b d CH XXI SECT 4 395a c

35 BERKELEY *Human Knowledge* SECT 15 415d 416a SECT 43 44 420d-421a SECT 65-66 425d 426a SECT 145 154 441d-444b passim, esp SECT 48 442b d

53 JAMES *Psychology* 161a 176a esp 164 165b, 166a b 168b 169a 175a 176a 299 311a esp 300a 301a 307a 308a 310b 311a 313a 411

478a b 502a 503a 553b 558b e p 555a b 558b 561b [fn 2] 573b 574a 606b-610b esp 608a 609a 620b 621a 664b 665b

1c The things of nature functioning symbolically the book of nature

5 AESCHYLUS *Prometheus Bound* [442-506] 44 45a
5 ARISTOPHANES *Birds* [708-7 5] 551d
8 ARISTOTLE *Prior Analytics* BK II CH 27 92a 93a c
16 KEPLER *Epitome* BK IV 853b 856b / *Harmonies of the World* 1080b-1085b passim
18 AUGUSTIN *Christian Doctrine* BK I CH 2 624d 625a BK I CH 1 636b d 637a
19 AQUINAS *Summa Theologica* PART I Q 1 A 10 9c 10c Q 57 A 4 ANS and REP 3 298a 299a
20 AQUINAS *Summa Theologica* PART III Q 12 A 3 REP 2 778b 779a Q 60 A 2 ANS and REP 1 848a d A 4 REP 1 849c 850b
21 DANTE *Divine Comedy* HELL, XXIV [-2] 34d
25 MONTAIGNE *Essays* 212 c
26 SHAKESPEARE *3d Henry VI* ACT V SC VI [44 79] 103c 104a / *Richard II* ACT II SC IV [7 17] 334c d / *1st Henry IV* ACT III SC I [12-49] 450 c / *2nd Henry IV* ACT I SC I [60-103] 468d 469b
27 SHAKESPEARE *King Lear* ACT I SC II [112 166] 249a-c
29 CERVANTES *Don Quixote* PART II 381a b
33 PASCAL *Pensées* 173 203b 204a
35 BERKELEY *Human Knowledge* SECT 43 44 420d 421a SECT 65-66 425d 426 SECT 108-109 434a b SECT 146-154 442a-444b passim esp SECT 148 442b d
36 SWIFT *Gulliver* PART III 111a b
46 HEGEL *Philosophy of History* INTRO 203 PART I 235d 236c 252c d PART II 263d 265
47 GOETHE *Faust* PART II [4679-4727] 116b 117b
48 MELVILLE *Moby Dick* 1a 3a 115b 122b esp 120a b 135 137a 138b 145a 204a 205 231a 236a 238a 331a 332a

1d The conventional notation of human language: signs for words

OLD TESTAMENT *Genesis* 2 19-20 -9
6 HERODOTUS *History* BK I 49 c BK V 171 b
7 PLATO *Cratylus* 107c 114a c / *Phaedrus* 138c 139b / *Philebus* 612d 613a
8 ARISTOTLE *Interpretation* CH 1 [6 4-8] 25 / *Soul* BK I CH 8 [42 b 6-] 652a
12 LUCRETIUS *Nature of Things* BK V [8-1 9] 74c 75b
15 TACITUS *Annals* BK XI 103c d
18 AUGUSTINE *Confessions* BK x par 19 76 b BK XI p 34 119d 120b / *City of God* BK X CH 3 307b / *Christian Doctrine* BK II CH 4 636b d 638a c 24 648d 649

19 AQUINAS *Summa Theologica* PART I Q 107 A 1 REP 1 3 549b 550b
20 AQUINAS *Summa Theologica* PART III Q 60 A 6 ANS 851b 852b
21 DANTE *Divine Comedy* PARADISE XXVI [124-138] 147a b
23 HOBBES *Leviathan* PART I 54c 56a
25 MONTAIGNE *Essays* 300
30 BACON *Advancement of Learning* 62d 63a
31 DESCARTES *Discourse* PART V 59 60b
33 PASCAL *Geometrical Demonstration* 430b 431b
35 LOCKE *Human Understanding* BK I CH XVI SECT 5-7 166b 167b CH XVIII SECT 7 174d 175a CH XXII SECT 5-7 201d 202b CH XXIII SECT 36 213c d CH XXVIII SECT 2 228c 229a BK II CH I SECT 1 CH II SECT 2 251b d 253c CH II SECT 8-CH III SECT 5 254b 255c CH V SECT 8 265c 266a CH VI SECT 43-51 280c 283a CH X SECT 24 298b SECT 7 298c d SECT 31 299a CH XI SECT 5 300d BK IV CH V SECT 10 331a CH XXI SECT 4 395a c
35 BERKELEY *Human Knowledge* SECT 121 436d 437b
36 SWIFT *Gulliver* PART I I 111a b
38 ROUSSEAU *Inequality* 339d 342c 349d 350a
40 GIBBON *Decline and Fall* 675d [n 83] 756a [n 43]
45 LAVOISIER *Elements of Chemistry* PREF 1 c
46 HEGEL *Philosophy of Right* PART I p r 8 32d 33a / *Philosophy of History* PART I 218a c
49 DARWIN *Descent of Man* 298d 299b 329a b 592a
53 JAMES *Psychology* 650b 683b 685a
54 FREUD *General Introduction* 516b c

1e The invention of non verbal symbols: money titles seals ceremonies courtesies

4 HOMER *Iliad* BK II [84 1 9] 10d 11a BK XVIII [478-613] 135a 136d
5 AESCHYLUS *Seven Against Thebes* [375-675] 31b 34b / *Agamemnon* [905-957] 61 62b
5 EURIPIDES *Hecuba* [299-331] 355b-c / *Phoenician Maidens* [1098 1140] 387d 388a
6 HERODOTUS *History* BK IV 146d 147a BK V 174b BK VI 264c BK IX 306b
6 THUCYDIDES *Peloponnesian War* BK 395c d BK V 485b
7 PLATO *Cratylus* 104d 105a
9 ARISTOTLE *Ethics* BK V CH 5 [1133 5 b29] 380d 381c / *Rhetoric* BK I CH 5 [1361a27 b2] 601d 602a
17 PLOTINUS *Fifth Ennead* TR VIII CH 6 242c d
18 AUGUSTINE *Christian Doctrine* BK CH 636b d 637a CH 3 637 d 25 649b d
19 AQUINAS *Summa Theologica* PART I Q AA 1 615d 617b
20 AQUINAS *Summa Theologica* PART Q 6 A 1 AN 858 859d
23 HOBBES *Leviathan* PART 73c 75d

(1 The theory of s gns 1e The ntention of non verbal symbols money t tles, seal cere mon s courtes s)

24 Rabelais Ga gantua and P ntagruel bk i 11d 14b bk ii 101b 106a
25 Montaigne Essay 215b 216b
26 Shakespeare R chard II ct iii sc ii [160–177] 337b act iv sc i [181–211] 343b c / King John act iv sc ii [1–34] 394b d / Merchant of Ven ce act ii sc vii [48–60] 416d sc ix [20 52] 417d-418a act iii sc ii [73 107] 420d-421a / 1st Hen y IV act v sc iv [77–101] 465a b / 2nd Henry IV act iii sc i [4 31] 482d-483a act iv sc v [21 47] 494c d / Hen y V act iv sc i [50–301] 554a c
27 Shakespeare Hamlet act iv sc v [175 186] 61c act v sc i [241 266] 66d 67a / T m n of Athen act i sc ii [15 18] 397a act iv sc iii [23 44] 410d 411a / W nter Tale act iv sc iv [73–108] 508 509a
35 Locke C vil Government ch v sect 37 33a b sect 46 51 35a 36a ch xvi sect 184 68b d
37 Fielding Tom Jone 310c
38 Montesquieu Spirit of Law bk xviii 128b bk xxi 174b 175a
38 Rous eau Inequal ty 341a b
39 Smith W alth of Nat ns bk i 10b 12c bk ii 123b d
40 Gibbon De l ne and Fall 154d 155a 240 244c
41 G bbon D l n nd Fall 75b d 178b 307b 317b 319b 322a 389b 390a
43 Mill L t l t a n sm 462
46 Hegel Ph lo ophy of R ght part i par 58 27a par 64 28c d par 8 32d 33a p rt ii par 164 59a d par 2 7 72b ad tio 37 122c 4 122d 123b 4 / 124b 06 134a
48 Melville Moby D ck 138b 139b 385b
50 Marx Capital 40c-41a 41d 44a 44d 45 58a 60a
51 Tolstoy W a and P a bk 198b 203a 206b-c 212a c 230b 232 233b bk vi 244b-c 248b 249a bk x 355b bk x 423d-424a 424c d
52 Dostoe sky F ther Ka ama bk ii 36b-c bk i 147 d k i 171a
54 Freud Origin and Dev l pm nt f P y ho nalys 4a b / General Int du t n 510 555a / A w l s d ctory Le tu 815c d

1f Natural s gns as the source of mean ng in con ent on l s gns thought as the me dium thro gh which words signify things

7 Plato Cratylu 104d 114a c Seventh Letter 809c 810d
8 Aristotle In erpr tat on i [16 4–8] 25a / Soul bk i 8 [420b 2 7–421] 652b / Sense and the Sen ble i [437a 11 17] 674a
18 Augustine Christ an Doctrine bk ii ch 3 637c d
19 Aquinas Summa Theolog a part i q 13 a 1 ans 62c 63c a 4 ans and rep 1 65c 66b a 10 rep 5 72c 73c q 27 a 1 ans 153b-154b q 85 a 2 rep 3 453d 455b
20 Aquinas Summa Theolog a part i ii q 93 a 1 rep 2 215b d 216c part iii q 60 aa 6–8 851b 854d passim
31 Descartes D scou se part v 59c 60b
35 Locke Human Understanding bk ii ch xi sect 9 145b c ch xxxii sect 8 244d bk iii ch ii sect 5 253d 254a ch iii sect 13 257c 258a ch iv sect 2 60b ch v sect 13 266d 267a ch xi sect 24 305b-d
35 Berkeley Human Knowledge intro sect 18 19 410a c
53 James Psychology 18b

2 The modes of signification

2a The first and second imposition of words names signifying things and names sig nifying names

23 Hobbes Leviathan part i 57b part i 270a b

2b The first and second intention of n mes words signifying things and words sig n fying ideas

19 Aquinas Summa Theolog ca part i q 29 a 1 rep 3 162a 163b a 2 ans 163b-164b q 30 a 4 ans 170c 171b q 85 a 2 rep 2 453d 455b
23 Hobbes Lev athan part i 57d 58a part iv 270a b
24 Rabelais Ga gantua and Pantagru l bk ii 79c bk iii 150a
35 Lo ke Huma Under tanding k iii c ii 252d 254c p 4 m c i iii sect 11 257a b ch iv sect 2 260b ch v sect 12 266d 267a ect 14 267b c ch vi sect 19 273b sect 48 50 282b d c i xi sect 10 302b sect 24 305b d
45 Lav ier Elements of Chem try pre 4b c
53 J e P y hology 127b-128a

2 Intr ns c and extrinsic denom nations the naming of things accord ng to th r natures or by reference to the r rela t ons

Old Te t ment Gene s 2 9–20
7 Pl o C atylu 85a 114a c / Theaet tu 5 0b
8 Ar totle Catego es ch i [1 13 16] 3b / T p bk i ch 5 [10 1–9] 149d [06 r] 150d 151a
19 Aqu n Summa Theol g a p rt i q 13 a 3 63c 65c 5 n 66b-67d 6 a 1 and r 2 3 67d 68c -8 68d 71b a 10 72 73 ii rep 3 73 4b q 29 a 1 rep 3 162a 163b 4 165c 167a q 34 3 188b 189 a 4 214b 215b

(3 *The patterns of meaning in human discourse* 3a *Verbal ambiguity: indefiniteness or multiplicity of meaning*)

36 STERNE *Tristram Shandy* 234b 236b 307b 308b
37 FIELDING *Tom Jones* 38d 39a 264b
38 MONTESQUIEU *Spirit of Laws* BK XII 89c d
42 KANT *Pure Reason* 113b c / *Practical Reason* 294b-c 315d 316a / *Science of Right* 400d
43 FEDERALIST NUMBER 37 120a b
43 MILL *Utilitarianism* 447b d
46 HEGEL *Philosophy of History* PART I 218a c
50 MARX *Capital* 104d [fn 4]
53 JAMES *Psychology* 549b 550a
54 FREUD *Interpretation of Dreams* 277d 278a / *General Introduction* 517c 518b 540c 541b

3b The distinction between univocal and equivocal speech

8 ARISTOTLE *Categories* CH I [1ª1] 5a / *Interpretation* CH I [16ª4 8] 25a / *Topics* BK VI CH 10 [148ª23-ᵇ4] 202b c / *Metaphysics* BK I CH 9 [990ᵇ33-991ª8] 509a b BK XI CH 3 [1060ᵇ31 36] 589a
19 AQUINAS *Summa Theologica* PART I Q I A 10 REP I 9c 10c Q 13 A 5 66b 67d A 10 72c 73c Q 29 A 4 ANS and REP 4 165c 167a
30 BACON *Advancement of Learning* 60b-c
31 SPINOZA *Ethics* PART I PROP 17 SCHOL 362c 363c
35 LOCKE *Human Understanding* BK II CH IV SECT 5 131a CH XXIX SECT 9 235c d BK III CH IX SECT 15 16 288d 289c CH X SECT 5 292d 293a CH XI SECT 3 7 300b 301c BK IV CH VII SECT 15 343d 344a CH VIII SECT 11 348b-c
35 HUME *Human Understanding* SECT VIII DIV 62-63 478b d
36 STERNE *Tristram Shandy* 307b 308b
42 KANT *Science of Right* 400d
53 JAMES *Psychology* 875b 876a

3c The types of equivocation

3c(1) The same word used literally and figuratively: metaphors derived from analogies or proportions and from other kinds of similitude

8 ARISTOTLE *Categories* CH I [1ª1-6] 5a / *Topics* BK VI CH 2 [139ᵇ33 140ª6] 192d 193a
9 ARISTOTLE *Ethics* BK V CH 11 [1138ᵇ5 14] 387a c / *Rhetoric* BK III CH 2 [1404ᵇ7 1405ᵇ3] 655a d CH 3 [1406ᵇ5]-CH 4 [1407ª16] 657a d 6 [1408ª2-9] 659a CH 10-11 662c 666b / *Poetics* CH 21 [1457ᵇ1 33] 693a-c CH 25 [1461ª8 20] 697c d

18 AUGUSTINE *Confessions* BK V par 24 34a BK VI par 6 36c d / *City of God* BK XI CH 450 451c BK XX CH 21 549d / *Christian Doctrine* BK II CH 10 640d 641a BK III CH 657b CH 5 37 650d 674d
19 AQUINAS *Summa Theologica* PART I Q I 9-10 8d 10c Q 3 A I REP 1-5 1 b 15b A REP I 15c 16a A 3 REP I 16a d Q 13 A ANS and REP I 63c 64d A 3 64d 65c A ANS and REP 2 67d 68c A 10 CONTRARY 72 73c Q 34 A I ANS and REP I 4 185b 187b 67 A I 349d 350b A 2 REP 3 350b 351a 68 A 4 ANS 358b 359b
20 AQUINAS *Summa Theologica* PART I II Q 10 A 2 REP 2 252b 253a PART III Q 8 A I REP 756d 757c
23 HOBBES *Leviathan* PART I 55b 59d 61c PART III 176d 177d 181d 193d 195d
25 MONTAIGNE *Essays* 422c-423c
28 HARVEY *Motion of the Heart* 267a b
30 BACON *Advancement of Learning* 65b c
35 LOCKE *Human Understanding* BK III CH SECT 5 252b c
35 BERKELEY *Human Knowledge* SECT 144 441d
36 SWIFT *Gulliver* PART III 114b 115b
40 GIBBON *Decline and Fall* 775c d [n 173]
42 KANT *Judgement* 547b 548c
53 JAMES *Psychology* 380 381a 689a b
54 FREUD *General Introduction* 510b-c 512d 513a

3c(2) The same word used with varying degrees of generality and specificity: the broad and narrow meaning of a word

9 ARISTOTLE *Ethics* BK V CH I 2 376a 378c / *Poetics* CH 21 [1457ᵇ7 16] 693b
18 AUGUSTINE *Christian Doctrine* BK III CH 34 35 670c 672d
19 AQUINAS *Summa Theologica* PART I Q 2 A 2 ANS 154c 155b Q 67 A I 349d 350b A 2 REP 3 350b 351 Q 68 A 4 358b 359b Q 115 A 2 ANS 587c 588c
20 AQUINAS *Summa Theologica* PART I II Q 49 A I 1b 2b PART II II Q 9 A 2 ANS and REP 2 424b-425a Q 186 A I ANS 650 651d
39 SMITH *Wealth of Nations* BK II 123b-d
43 MILL *Utilitarianism* 447b d
54 FREUD *General Introduction* 509d

3c(3) The same word used to signify an attribute and its cause or effect

8 ARISTOTLE *Topics* BK I CH 15 [106ª1-9] 149d [106ᵇ33 107ª8] 150d 151a BK V CH 2 [129ᵇ30-130ª] 180 / *Metaphysics* BK I CH 2 [1003ª33 ᵇ11] 522b BK VII CH 4 [1030ª31 ᵇ3] 553a b BK XI CH 3 [1060ᵇ36 1061ª] 589a b
19 AQUINAS *Summa Theologica* PART I Q 13 A 5 ANS 66b-67d A 6 ANS and REP 3 67d 68c

10 ANS 72c 73c Q 16 A 6 ANS 98b d PART I II Q 20 A 3 REP 3 713c 714c
20 AQUIN S Summa Theologica PART III Q 60 A I ANS 847b 848a

3d The significance of names predicated of heterogeneous things the analogical as intermediate between the univocal and the equivocal

8 ARISTOTLE Interpretation CH 3 [16b19 26] 25d 26a / Topics BK I CH 15 149d 152a passim / Sophistical Refutations CH 7 [169 22 25] 232d / Physics BK I CH 2 [185a20]-CH 3 [187 10] 260 262a BK VII CH 4 [248b7 249 24] 331b 332b / Metaphysics BK I C 9 [992b 8 24] 511a BK III CH 3 [998b22 27] 517c BK IV CH 2 [1003b 3 34] 522d BK V CH 6-7 536a 538b CH 9 538c 539a BK VII CH I 550b d 551a BK X CH I [105 b1-15] 578d 579 CH 2 580b d BK XI CH 2 [1060 36 b10] 588c BK X CH 4-5 599d 601a
9 ARISTOTLE Ethics BK I CH 6 [1096 17 29] 341b-c
19 AQUINAS Summa Theologica PART I Q 3 A 4 REP I 16d 17c A 6 REP I 18 19a Q 4 A 3 ANS 22b 23b Q 13 AA 5-6 66b 68c A 10 72c 73 Q 29 A 4 REP 4 165c 167a
20 AQUINAS Summa Theologica PART I-II Q 61 A I REP I 54d 55c
35 LOCKE Human Understanding K II CH XIII ECT 8 152a c
42 KANT Pure Reason 181b 182b

4 The determination of meaning in science and philosophy

4a The relation between univocal meaning and definition

7 PLATO Sophist 552b c
8 ARISTOTLE Categories CH 5 [3 3 -b9] 7c d / Posterior Analytics K II H 13 [97b37-39] 133c / Topics BK IV CH 3 [3 27 29] 171d H 6 [127 5-6] 177a BK VI H 2 192c 193b C I 10 [48 22 b22] 02b 203a BK VII CH 4 [54 4 18] 209 BK V I CH 3 [58b8 59a2] 215b-c / Soul K I CH I [40 b1-8] 631 d
9 ARISTOTLE Parts of Animals BK I CH 3 165d 167d
19 AQUIN Summa Theologic PART Q 13 A I ANS 62 63
23 HOBBES Leviathan P RT I 56b P RT I 269b c
33 PASCAL Geometrical Demonstration 430b 434a
35 LOCKE Human Understanding BK II CH XI SE T 302d
35 BERKELEY Human Knowledge NTRO S CT 18 410a c
43 FEDERAL T NUMB R 37 120a b
49 DARWIN Descent of Man 347a c
53 JAMES Psychology 121b 122a

4b The dependence of demonstration on univocal terms formal fallacies due to equivocation

8 ARISTOTLE Prior Analytics BK I CH 34 66b c / Posterior Analytics BK I CH II [77 5-9] 105d 106a / Topics BK I CH 3 [158b8 17] 215b / Sophistical Refutations C 4 [165b24-166b] 228b 229c CH 24 [179b38-180 7] 247d 248a / Heavens BK I CH II [280 1-7] 371d 372a / Metaphysics BK IV CH 4 [1006 33 b12] 525c d
9 ARISTOTLE Rhetoric BK II CH 24 [1401 13 23] 650b
12 EPICTETUS Discourses BK I CH 7 112b 113d
19 AQUINAS Summa Theologica PART I Q I A 10 R P I 9c 10c Q 13 A 5 ANS 66b-67d
23 HOBBES Leviathan PART I 57d 58a PART III 172a
35 LOCKE Human Understanding BK III CH IX SECT 15 16 288d 289c CH X SECT 22 297 298a CH XI S CT 7 26 301 306d passim
35 HUME Human Understanding SECT VI DIV 62 63 478b d
36 STERNE Tristram Shandy 307b 308b

4c The nature and utility of semantic analysis the rectification of ambiguity the clarification and precision of meanings

7 PLATO Protagoras 52d 57a / Euthydemus 68 d / Cratylus 107 114a c / Phaedrus 120a b
8 ARISTOTLE Categories CH I [13-16] 5b CH 7 [6b26-7b14] 11b 12b CH 8 [10 26-b11] 15b c / Topics K I CH 5 149d 152a CH 18 [108 8-36] 152b d BK II CH 3 154d 155d BK V H 4 [133b15 134 4] 184d 185b BK VI CH 10 [48 23-b2] 202b 203a / Sophistical Refutations CH 19-23 243d 247a / Physics BK VII CH 3 [245b9 246 4] 329 b / Heavens BK I CH I 371d 372d CH 12 [281b 15] 373a b / Metaphysics BK I CH 9 [992b18 24] 511a BK IV C I 4 [006 33 b4] 525 d K V 533a 547d BK IX CH 7 [1 49 9 b1] 574d 575a / Soul BK II CH 4 [4 6b 25] 647a
9 ARISTOTLE Ethics K V CH I [129 18 31] 376b d
10 GALEN Natural Faculties BK I CH I 167a b
12 EPICTETUS Discourses K I H 7 122d 123
18 AUGUSTINE Christian Doctrine BK I 65 674d
19 AQUINAS Summa Theologica ART I QQ 7 43 153a 237a passim RT II Q I AN 720d 721c
20 AQUINAS Summa Theologica ART I I Q 49 A 1b 2b
23 HOBBES Leviathan ART I 54c 58 58d 60 60 P T II 157c d P R V 269b 272b 273a b 274a b
30 BACON Advancement of Learning 60b-c 63 b

5b S pe n tur l sign om n port nts v ta t ons dre m mir cles

(5 *Symbolism in theology and religion* 5b *Supernatural signs: omens, portents, visitations, dreams, miracles*)

6 HERODOTUS *History* BK I 4d 8a b 12b d 17a b 18b 20d 21a 38a b 39c 40a BK II 60d 61b 79a c 83b c 86c 87a BK III 90d 91a 95d 116a b BK IV 124d 125a 126d 127a 135b c 138 b 150b d 154c d 155b c BK V 170 d 176c d 183d 184a BK VI 190c d 200d 201a 204b c 208b BK VII 219a c 238d 239a BK VIII 266b d 267a 270c 271a 283d BK IX 289d 290a 30?c 309d 310a 313d 314a

7 PLATO *Euthydemus* 66a / *Apology* 207b c 211a b / *Timaeus* 467a c

8 ARISTOTLE *Prophesying* 707a 709a c

9 ARISTOTLE *History of Animals* BK III CH 11 [518 3 36] 43a CH 20 [522 13 19] 47a b

12 LUCRETIUS *Nature of Things* BK V [1161-124] 76b 77b BK VI [43-79] 80d 81b [379-422] 85b d

12 EPICTETUS *Discourses* BK I CH 17 123c 124a BK III CH I 177a b

13 VIRGIL *Aeneid* BK I [387 401] 113b 114a BK II [16 233] 128b 130b [679-704] 143b 144a BK III [90-101] 149b 150a [135 191] 150b 152b [388 393] 157b 158a [523-547] 161b 162a BK VI [190-211] 216a b BK VII [59-80] 237b 238a BK VIII [26 89] 259b 261b [520-54] 273a b BK XII [244 265] 360b-361a

14 PLUTARCH *Numa Pompilius* 52b c / *Poplicola* 82a b / *Timoleon* 198c d / *Pelopidas* 239d 240c / *Aristides* 268a d / *Sulla* 371d 372c / *Lucullus* 404d 405a 405c / *Agesilaus* 483a b / *Alexander* 568a b / *Demosthenes* 698b 699a / *Dion* 781d 782a / *Marcus Brutus* 818a b 822b

15 TACITUS *Annals* BK I 9a b BK II 26c 27b BK IV 79b BK VI 95d 96a BK XI 105c BK XII 112d 113a 119b 124b BK XIV 149b c BK XV 168d 169a / *Histories* BK I 206a 212d 213a BK II 228a b 235a c BK III 256d BK IV 93a 294a

18 AUGUSTINE *Confessions* BK III par 19-20 18b 19a / *City of God* BK X CH 8 303a d CH 12 13 306d 307c CH 16-18 308b 310d BK X CH 12 323b BK XXII CH 8 591d 599b

19 AQUINAS *Summa Theologica* PART I Q 51 A 2 REP I 276b-277 Q 104 A 4 ANS 538a-c Q 105 A 7 544a d Q 106 A 3 ANS and REP 2 547 548b Q 110 A 4 567c 568b

21 DANTE *Divine Comedy* PURGATORY IX [13 69] 66 c XIX [1-63] 81c 82a XXVII [91 108] 95c

22 CHAUCER *Troilus and Cressida* BK V STANZA 52 55 127a b STANZA 177 186 143b 144b STANZA 207 19 147a 149a STANZA 245 152a

23 HOBBES *Leviathan* PART I 51b 52 80b d 81d 82b PART II 160b PART III 165d 167a 177a c 183b 187 188a 191a

26 SHAKESPEARE *Julius Caesar* ACT I SC III [1 71] 572c 573b ACT IV SC III [275 289] 591c ACT V SC I [71-89] 592d

27 SHAKESPEARE *Hamlet* ACT I SC I [64 125] 30b 31a / *Macbeth* ACT II SC IV [1 20] 294a b / *Cymbeline* ACT V SC IV [91 122] 482a b

29 CERVANTES *Don Quixote* PART II 381a b

30 BACON *Advancement of Learning* 8c 19b 41b c 54c d 55b d / *New Atlantis* 202c 203c

32 MILTON *Paradise Lost* BK I [594 599] 106b BK V [28 128] 176a 178a BK XI [193 366] 303b 307a / *Areopagitica* 389a b

33 PASCAL *Pensées* 803 856 328b 341b passim

35 LOCKE *Human Understanding* BK IV CH XVI SECT 13 371a b CH XIX SECT 15 388a-c

35 BERKELEY *Human Knowledge* SECT 63 425b c

35 HUME *Human Understanding* SECT X DIV 92 101 491c 497b esp DIV 98 101 495d-497b

40 GIBBON *Decline and Fall* 180b c 189b-190d 206b d 294a 296b 445d 446b 465d 467a 547a b 571a 605b d 614b c

41 GIBBON *Decline and Fall* 232a c 398b 399b

44 BOSWELL *Johnson* 126b c

47 GOETHE *Faust* PART I [430-513] 12b 14b

51 TOLSTOY *War and Peace* BK IX 377b-379a BK XII 561b 562a

52 DOSTOEVSKY *Brothers Karamazov* BK I 11a b BK V 129c 135a

54 FREUD *Interpretation of Dreams* 138a-c / *General Introduction* 477b c

5c *The symbolism of the sacraments and of sacramental or ritualistic acts*

OLD TESTAMENT *Genesis* 17 9-14 / *Exodus* 12 1 13 16 20 8 11 24 5-8 31 13 17 / *Leviticus* passim esp 16 3 / *Numbers* 15 37 41 16 3 40 / *Deuteronomy* 5 12 15 6 5-9 11 18 21 16 1 17 / *Joshua* 4 1-9—(D) *Josue* 4 1-9 / *Esther* 9 20-32 / *Ezekiel* 20 12,20—(D) *Ezechiel* 20 12 20

APOCRYPHA *Rest of Esther* 16 20-22—(D) OT *Esther* 16 20-22 / *II Maccabees* 1 18 22—(D) OT *II Machabees* 1 18 22

NEW TESTAMENT *Matthew* 26 26-28 / *Mark* 14 22 24 / *Luke* 22 19-20 / *John* 3 3 7 6 30-59 / *Acts* 2 38 39 22 16 / *Romans* 6 3 4 / *I Corinthians* 10 16-17 11 23 27

18 AUGUSTINE *City of God* BK X CH 5-6 301b-302d CH 19-20 310d 311c BK XVI CH 26 438c-439a BK XX CH 20 575c d CH 25 579d 581a / *Christian Doctrine* BK II CH 3 637c d BK III CH 5-9 659d 661c BK IV CH 21 690d 691b

19 AQUINAS *Summa Theologica* PART I Q 92 A 3 ANS 490 -491b

20 AQUINAS *Summa Theologica* PART I II QQ 101 103 265d 304a PART III QQ 60-65 847a 884 c

22 CHAUCER *Parson's Tale* par 1 22 495a 510b esp par 22 510b

23 HOBBES *Leviatha* PART III 177d 178a 180 d 206c 207a 211c 212a PART IV 249b 250c 263d 264a
32 MILTON *Paradise Lost* BK XII [436-445] 328b-329a
33 P CAL *Provincial Letters* 71b 80b 128b 137b / *Pensees* 862 343a 870 344a b 923 351b
35 HUM *Human Understa ding* SECT V DIV 41 468a b DIV 43 468c
40 GIBBON *Decl ne and Fall* 82a 294b d
41 GIBBON *Decl ne and Fall* 83d 334b
46 HEGEL *Philosophy of Hi tory* PART IV 331d 33 c 338a d
51 TOLSTOY *War and Peace* BK V 198b-203a BK V 244b c 248b 249a
54 FREUD *Ge eral Introduction* 512a

5d The symbolism of numbers in theology

OLD TESTAM ENT *Exodus* 8 11
AP RY HA *Wisd m of Solomon* 11 —(D) OT *Book f Wis dom* 1 21
N v TES MENT *Revel tion*—(D) *Apocalypse*
14 P UTARCH *Numa Pomp l us* 56d 57a
16 KEPLER *Epitome* K IV 853b 854a / *Har mon s of the World* 1049b 1050a 1077b
18 AUGUSTINE *Co fessions* BK III par 16 17c / *C ty f G d* BK X CH 3 31 339c 340b BK X I CH 18 354b d BK XV C I 2 414d 415b BK XX CH 7 535b 536d BK XXII CH 3 618c d / *Christ n Doctrine* BK I CH 16 644d 645d K I I CH 35 672a d
19 AQUIN S *S mma Theolog ca* PART I Q 5 A 5 R 26c 27c Q 74 A 3 REP 3 375a 377a
20 AQUINAS *Summ Theologica* PART III SU Q 96 A 4 1054b 1055
21 D T *D in C medy*
36 ST RNE *Trist m Sl andy* 259a b
51 T LS OY *War and P a e* K V 248b c K IX 377c 378c
54 FR UD *General In'roduct n* 511

5e The inte pret tion of the word of God

OLD T S M NT *D iel* 2 47 5 5 8
N w T STAM T *M tthew* I 15 0-20 18 23-35 19 3-9 I 16 2 28 45 2 I-14 3 3 25 30 / *M k* 2 23 8 4 34 I 2-9 I I 2 18-27 / *L k* 6 I 5 39 49 8 4 8 12 16 2 36-48 14 7 I 5-33 5 16 8 -8 19 I 27 0 9 9 37 38 / *J hn* 5 38 39 46-47 I I 4 33 36 / *Acts* 7 3 16-36 / *Roma s* 4 9-11 pass m 19-20 14 0-13 5 I 4 / *G l t ans* 3-4 pa m / *I Peter* I 10- 6 2 5-8 / *II Peter* 19-21
5 A S HY U *Prom theu Bound* [645-668] 46d 47a
5 S PHO LE *O d pus the K i g* [463-512] 103 d [1432 1445] 112b c
5 ARI TO HANE *Kn ghts* [40 22] 470c-472 [960- 089] 482 483 / *P c* [043 I 6] 537d 539a / *B rds* [959-99] 554c 555 / *Lysistrata* [762 780] 593a b / *Plut s* [1-55] 629a d
6 HERODOTUS *History* BK I 11b c 21b 22a K VI 199d 201a BK IX 295d 296c
6 THUCYDID S *Peloponnesian War* BK II 39 a b 401a b
7 PLATO *Apol gy* 201d 203a
18 AUGUSTINE *Confessions* BK III par 9 15a b K V par 24 34a b BK VI par 6 36c d BK XII par 32-36 107a 108c BK XII par 4 -BK XIII par 53 110a 125a c / *City of God* BK XI CH 30 32 339c 340d BK XI I CH 21 371a c BK XV CH 2 3 398c 399c CH 25 27 419a-421d BK XVI CH 2 422b-423d CH 6 426c-427a CH 37 444b-445 BK XVII CH 3 450c 451c BK XVIII CH 42 44 496d-498c BK XX 530a 560a c esp CH 21 549d CH 28- 9 556c 557c / *Christ an Doctri e* BK I III 624a 674d
19 AQUINAS *S mma Theol g ca* PART I Q I AA 9 10 8d 10c Q 3 A REP 1-5 14b 15b Q 9 A 3 REP I 164c 165c Q 51 A 2 RE I 276b 277a QQ 65-74 339a 377a c passim esp Q 68 A I ANS 354a 355c A 2 ANS 355d 357a
20 AQUINAS *Summa Theolog a* PART II II Q I AA 9-10 388d 390d PART III Q 60 A 4 AN 849c 850b A 5 REP I 850b 851b
21 DANTE *Divine Comedy* PARADI E IV [28-48] 111a
23 HO ES *Leviathan* PART I 70 71a PART II 160b c PART III 155a 188a 191b 199 215b-216b 246c PART IV 247a 258b 259a 260c
27 SHAK S E E *Cymbel ne* ACT V SC V [426-485] 488b d
30 BACON *Advancement of Learning* 2 4c 17b 20a 98a 100b
33 PASCAL *Pro incial Letters* 78b 80b 163 164b / *Pensees* 5 0-588 273b 277b 642-692 290b 301 775 323b 324a
35 LOCK *Tolerat on* 21 22d / *Hum n Under stand g* K I I CH X S CT 9 286d 287b CT 23 291b c CH X SECT 12 294b c
36 STERNE *Tristram Shandy* 256a 258a
41 G BON *Decl e and Fall* 329d 330a
42 KANT *Judgement* 547b d
43 M L *L berty* 290a b
47 GO THE *Fa st* PART I [1220 237] 30a b
51 TOLSTOY *W r d Peace* BK IX 377 378c
52 DOS O VSKY *Br ther K m* BK V 129c 135 K VI 150d 153d

5f The n mes of God the use of word to gn fy th d ne n ture

OLD T TA NT *Exodus* 3 13 14 6 2-3 5 3 7 34 5-7 14 / *Lev tici s* 9 I 21 6 22 3- / *Deu ter nomy* 5 11 28 58-59 / *II Samuel* 22 2-3 23 3—(D) *II K i s* 22 2-3 23 3 / *P lm* 8 esp 8 9 68 4 83 5 8 135 3—(D) *Psalms* 8 esp 8 I 67 5 8 6 9 34 13 / *I h* 41 4 42 8 44 6 47 4 48 2 5 5 54 5 63 6—(D) *I* 4 4 4 8 44 6 47 4 48 2 51 5 54 5 63 6 / *Jerem ah* 10 16 16 I 3 6 31 35 32 18 33 2 5 34

(5 *Symbolism in theology and religion* 5*f The names of God: the use of words to signify the divine nature*)

51 19—(*D*) *Jeremias* 10 16 16.21 23 6 31 35 32 18 33 2 50 34 51 19 / *Daniel* 7 9 13 / *Amos* 4 13 5 8 9 6

APOCRYPHA *Wisdom of Solomon* 14 20 21—(*D*) OT *Book of Wisdom* 14.20 21

NEW TESTAMENT *Matthew* 6 9 / *Luke* 11 2 / *Revelation* 1 8 21 6 22 13—(*D*) *Apocalypse* 1 8 21 6 22 13

5 AESCHYLUS *Agamemnon* [160–183] 53d 54a

6 HERODOTUS *History* BK II 49d 50a 60a d 80a c BK IV 134a

7 PLATO *Cratylus* 91c d 93d 97d

18 AUGUSTINE *Christian Doctrine* BK I CH 6 626 b

19 AQUINAS *Summa Theologica* PART I Q 3 A 2 REP 1 2 15c 16a A 3 REP 1 16a d A 6 R 1 18c 19a Q 4 A 1 REP 1 20d 21b A 3 ANS 22b-23b Q 5 A 2 REP 1 24b 25a Q 13 62b 75b Q 14 A 1 REP 1 2 75d 76c PART I II Q 14 A 1 REP 2 677b 678a Q 47 A 1 R 1 819c 820b

21 DANTE *Divine Comedy* PARADISE IV [28 48] 111a XXVI [124 138] 147a b XXX [34-99] 152 d

23 HOBBES *Leviathan* PART I 54b 78d 79a 79d 80b passim PART II 162a 163b PART III 172d 173a 183d 184a

25 MONTAIGNE *Essays* 238d 239b

28 HARVEY *On Animal Generation* 443c

31 SPINOZA *Ethics* PART I PROP 17 SCHOL 362c 363c

34 NEWTON *Principles* BK III GENERAL SCHOL, 370a 371a

35 LOCKE *Human Understanding* BK II CH XIII SECT 18 152a c

38 ROUSSEAU *Social Contract* BK IV 435b

42 KANT *Pure Reason* 176 b

47 GOETHE *Faust* PART I [3432 3468] 84a b esp [3455 3457] 84b

51 TOLSTOY *War and Peace* BK VI 248d

6 Symbolism in psychological analysis

54 FREUD *Origin and Development of Psycho Analysis* 9b 14 esp 9d, 10d 11a 12 d 13c d / *Psycho Analytic Therapy* 123d 124a / *Interpretation of Dreams* 279b 291c / *General Introduction* 504d 513d esp 508c 513b 526d / *Civilization and Its Discontents* 778b d [fn 2] / *New Introductory Lectures* 815 816b 848 849b

6a The symbolism of dreams the latent and manifest content

4 HOMER *Odyssey* BK XIX [509-58] 294c 295a,c

5 AESCHYLUS *Persians* [6-230] 17 c / *Choephoroe* [523-552] 75b c

5 SOPHOCLES *Oedipus the King* [977–982] 108b

5 EURIPIDES *Iphigenia Among the Tauri* [42 66] 411c d

6 HERODOTUS *History* BK I 25b d 28c 29a 47a c BK II 78d BK VII 218b 220b esp 219a c

7 PLATO *Crito* 213b d / *Phaedo* 221d 222a

8 ARISTOTLE *Prophesying* 707a 709a c esp CH [464b7 18] 709c

14 PLUTARCH *Pyrrhus* 329c d / *Cimon* 398d 399b / *Eumenes* 473a b / *Alexander* 548d 549a / *Demosthenes* 702c 703b / *Demetrius* 727b d

21 DANTE *Divine Comedy* PURGATORY IX [1 69] 66a c XIX [1–63] 81c 82a XXVII [91 108] 95c

22 CHAUCER *Troilus and Cressida* BK V STANZA 52–55 127a b STANZA 177 186 143b-144b STANZA 207 219 147a 149a STANZA 245 152a / *Nun's Priest's Tale* [14 898 15 162] 451a 455b

25 MONTAIGNE *Essays* 533d 534a

26 SHAKESPEARE *2nd Henry VI* ACT I SC II [17–55] 36c 37a / *Richard III* ACT I SC IV [1–74] 114d 115b / *Romeo and Juliet* ACT I, SC IV [49–103] 291a c / *Midsummer Night's Dream* ACT II SC II [145 156] 360b c / *Julius Caesar* ACT II SC II [58 107] 578d 579b

27 SHAKESPEARE *Macbeth* ACT V SC I 306b-307a / *Cymbeline* ACT V SC IV [30–150] 481c 482c SC V [426–485] 488b d

32 MILTON *Paradise Lost* BK V [28 128] 176a 178a esp [100 109] 177b

46 HEGEL *Philosophy of History* PART II 263d 265c

48 MELVILLE *Moby Dick* 19a 20a

51 TOLSTOY *War and Peace* BK II 86a BK V, 249a 250 BK XI 481a 482a BK XII 561b 562a BK XIV 608a b EPILOGUE I 673d 674a c

54 FREUD *Origin and Development of Psycho-Analysis* 11a 13a esp 11d 12c / *Interpretation of Dreams* 173a 174d 178a 205c esp 178a 179c 189b 190a 194b d 197b 198d 204c d 230b 231c 252c 340a esp 252c 253a 264c 272c 282a 285b 332a 333b 339b 340a 356d 373a passim / *General Introduction* 476a-478b 489c-494d esp 492d 493c 504d 526c esp 504d 506c 518d 519d 539c 544d esp 539 540a 541b / *New Introductory Lectures* 808d 817a esp 809b 810b d 812d 813d 814b

6b The symbolism of apparently normal acts: forgetting, verbal slips, errors

54 FREUD *Origin and Development of Psycho-Analysis* 13 c / *General Introduction* 453b-476a c esp 467d 468a 546b 547a / *New Introductory Lectures* 852a b

6c The symbolism of anxieties, obsessions, and other neurotic manifestations

5 EURIPIDES *Orestes* [1 423] 394a 398b esp [255 259] 396c [385 4 0] 397c 398a

12 LUCRETIUS *Nature of Things* BK III [9 8–1023] 42d 43b
27 SHAKESPEARE *Macbeth* ACT V SC I 306b 307a
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The conception of ideas as intentions of the mind *see* IDEA 6a

The treatment of things or events in nature as signs or symbols *see* LANGUAGE 10 MEDICINE 3c

Another discussion of the distinction between first and second intentions *see* IDEA 3a

Other discussions bearing on the distinction between proper and common names and between abstract and concrete names *see* IDEA 4b(1)–4b(2) UNIVERSAL AND PARTICULAR 2c 5a

The problems of verbal ambiguity and for the distinction between univocal and equivocal speech *see* IDEA 4b(4) LANGUAGE 5–5b

Discussions relevant to the theory of analogical names or to the problem of how names can signify what is common to heterogeneous things *see* BEING 1 IDEA 4b(4) RELATION 1d SAME AND OTHER 3a(3)–3b 4c

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The problem of the names of God and the problem of the interpretation of Sacred Scripture *see* GOD 6a LANGUAGE 12 THEOLOGY 4b

Other discussions of the symbolism of dreams *see* LANGUAGE 10 MEMORY AND IMAGINATION 8d(1)–8e and for the theory of the neuroses and neurotic behavior relevant to the interpretation of psycholo ical signs *see* DESIRE 4a–4d EMOTION 3a–3c(4) MEMORY AND IMAGINATION 2e(2) OPPOSITION 4c

ADDITIONAL READINGS

Li ted bel w e v ks n t in lud d in *G eat B k f th W st rn W ld* but el v nt to the idea and top cs with wh ch th chapt deal These wo ks d v d d into tw g ups

I Wo k by utho p e ented th ll t on
II W k by th s not pr nted in this coll t on

F r the d te pl ce and othe fa ts co n n the publ tion of the w rks ted c n ult the B bliog phy of Add t o al Reading which f ll s th last ch pter f *The G t Ideas*

I

AUGU TI *Co g th Te her*
—— *Th H m y f th G p ls*
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AQU NAS *Qu st n D sput t De Verit te* Q 4
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Chapter 86 SIN

INTRODUCTION

THE sin of Satan and the sin of Adam are among the great mysteries of the Christian reli on Satan is highest among the angels the first of God s spiritual creatures He is only less than God in the perfection of his nature Adam is created with supernatural graces and gifts his immortal body is completely responsive to *his spirit his* appetite *in all things* is submis sive to his reason and his reason is turned toward God according to the original justice which harmonized his faculties and the ele ments of his nature

The only evil latent in either Satan or Adam would seem to reside in the privation of in finite being power and knowledge But this is not a moral *evil in them it is neither a sin nor* a predisposition to sin Hence the only cause of their sinning if God himself does not predes tine them to sin must be a free choice on their part between good and evil If God positively predestines them to sin then they would seem to be without responsibility and so without sin If they are not predetermined to evil—if except for the weakness of being finite they are without positive blemish—how does the con flict arise in them which opens the choice be tween good and evil and impels them almost against the inclination of their natures away from good and toward evil?

In Milton s *Parad se Lost* God says of Adam I made him just and right sufficient to have stood though free to fall Of Satan and fallen *angels* as well as of Adam God observes

They ther for s to ght b l gd
So were c e ted nor can ju tly acc se
Th make o th making o thir F te
As f P dest nat on over ul d
Th r will d pos d by absol te D c e
Of high for knowl dg they th m l es d reed
Thi own rev lt not I if I fo eknew
Fo ek owledge had no nfl ence n the r fault
Which had no less pr d ertain unforekn wn

Yet there is a difference between Adam and Satan The fallen angels by their own sug gestion fell self tempted deprav d Satan having sinned becomes man s tempter Man falls deceiv d by the other first Man therefore shall find grace the other none

As Satan approaches the Garden of Eden to work his will on man he contemplates his plight He does not deny his sin he does not repent it he does not seem fully to understand it Thus Milton has him speak

O thou that with surpass ng Gl y c owned
Lo k st from the sole Dom nion like the God
Of this ne World at whose sight all the Starrs
Hide thir diminisht he ds to thee I call
B t with no fri dly voice and add thy name
O Sun to tell thee how I hate thy beams
That bring to my r m mbrance from what state
I fell how glo once above thy Spheare
Till Prid and wo se Ambition th w me down
W r in n Heav n against Heav n matchless Ki g
Ah whe f el he deser ed no uch return
F om me whom he created what I was
In that bright eminenc and ith his good
Upbraided none n r w s his service hard
What could be l s than to aff d him p aise
The ea e t ompense nd p y h m thanks
H w due! yet all his good prov d ill in me
A d wrought but mal ce lifted up so h h
I sdeind subj ct on and th ght on step l gher
Would set me highest and n a moment qu t
Th debt mm e of endl g at tude
S bu thens m t ll pay ng st ll to o e
O had his pow ful D t ny orda n d
M m fer or Ang l I h d t od
Th n happ n i bound d hop h d ra s d
Amb t on Yet why not? some th r Powe
As g eat m ht have a p r d and me thr u h mean
Dra n to h p rt but other P we s as gr t
Fell not but stand u hak n f m with n
O f om with ut to all t mptations m d
H ds t thou th sam free Will and Powe t t nd?
Th u h d t whom h thou th n o wh t to ccuse
But Hea ns f Lo dealt qu lly to ll?
B th n h s Love accu t n lov or hate
T m alik t deals t I woe
N y cu sed b th u ce again t his thy w ll

Chose freely what it now so justly rues
Me miserable! which way shall I flie
Infinite wrauth and infinite despaire?
Which way I flie is Hell; my self am Hell;
And in the lowest deep a lower deep
Still threatning to devour me opens wide,
To which the Hell I suffer seems a Heav'n.
O then at last relent: is there no place
Left for Repentance, none for Pardon left?
None left but by submission; and that word
Disdain forbids me, and my dread of shame
Among the spirits beneath, whom I seduc'd
With other promises and other vaunts
Then to submit, boasting I could subdue
Th' Omnipotent.

Before Satan approaches Eve, Adam reminds her of their debt of obedience, saying that God requires

From us no other service than to keep
This one, this easie charge, of all the Trees
In Paradise that beare delicious fruit
So various, not to taste that onely Tree
Of Knowledge, planted by the Tree of Life,
So neer grows Death to Life, what ere Death is,
Some dreadful thing no doubt; for well thou knowst
God hath pronounc't it death to taste that Tree,
The only sign of our obedience left
Among so many signes of power and rule
Conferrd upon us, and Dominion giv'n
Over all other Creatures that possesse
Earth, Aire, and Sea. Then let us not think hard
One easie prohibition, who enjoy
Free leave so large to all things else, and choice
Unlimited of manifold delights.

The temptation to disobey first moves Eve in a dream in which the apparition of an angel speaks of the forbidden fruit

as onely fit
For Gods, yet able to make Gods of Men:
And why not Gods of Men, since good, the more
Communicated, more abundant growes,
The Author not impair'd, but honourd more?

"Here, happie Creature," the vision says to her,

Happier thou mayst be, worthier canst not be:
Taste this, and be henceforth among the Gods
Thy self a Goddess, not to Earth confind,
But sometimes in the Air, as wee, sometimes
Ascend to Heav'n, by merit thine, and see
What life the Gods live there, and such live thou.

Later when Satan in the guise of the Serpent actually addresses Eve, he argues in the same vein: that as he, by tasting of this fruit, speaks as a man, so Eve and Adam, if they too partake, shall be as Gods, knowing both Good and Evil as they know. Eve succumbs and, as Milton tells the story, Adam, knowing fully the evil of his act, joins Eve in disobedience not from envy of the gods, but out of love for her, willing to die because unwilling to live without her.

Willing "to incurr divine displeasure for her sake, or Death,"

he scrupl'd not to eat
Against his better knowledge, not deceav'd,
But fondly overcome with Femal charm.
Earth trembl'd from her entrails, as again
In pangs, and Nature gave a second groan,
Skie lowr'd, and muttering Thunder, som sad drops
Wept at compleating of the mortal Sin
Original.

In the poet's expansion of the third chapter of Genesis, the basic elements in the Judaeo-Christian conception of sin seem to be plainly accented: the pride and envy which move Satan and Eve; the disobedience which results from the disorder of Adam's loving Eve more than he loves God. In the *Divine Comedy*, another great poem of sin and salvation, Adam speaks to Dante in Paradise and tells him that "the tasting of the tree was not by itself the cause of so great an exile, but only the overpassing of the bound." Earlier Beatrice explains why, in order to redeem man from sin, the Word of God assumed human nature—the nature "which has estranged itself from its Maker." She tells Dante that "this nature thus united with its Maker, was pure and good such as it was created; but by itself it had been banished from Paradise, because it turned aside from the way of truth and from its own life." Man can fall from his nobility by "sin alone which disfranchises him and makes him unlike the Supreme Good, so that he is little illumined by Its light; and to his dignity he never returns, unless where fault empties, he fills up with just penalties against evil delight."

In both the pagan and the Christian conceptions of sin, man's pride and his disobedience of divine commandment are usually connected with the very notion of sin. The heroes of the Greek tragedies exhibiting the tragic fault of pride seem to forget that, though they strive with gods, they are only men subject to laws they cannot disobey without catastrophe. In

the *Iliad* Phoenix cautions Achilles to battle with your pride and beat it cherish not your anger for ever the might and majesty of heaven are more than ours but even heaven may be appeased and if a man has sinned he prays the gods and reconciles them to himself by his piteous cries

In pride and disobedience we find the deep disorder of love which lies at the heart of sin Pride is self love in excess of what the self deserves Disobedience as in the case of Milton s Adam may be prompted by a love which too exceeds the worth of the object loved The measure of that worth or the bounds put upon the love of self or other is set by the Supreme Good which ordering all other goods should also order our loves in proportion to their goodness

This seems to be the central insight of the *Divine Comedy* It is given a summary statement in Purgatory where Virgil explains how love is the root both of virtue and of sin Neither Creator nor creature he says to Dante was ever without love either natural or of the mind and this thou knowest The natural is always without error but the other may err either through an evil object or through little or too much vigor While love is directed on the primal goods and with due measure on the secondary it cannot be the cause of ill delight But when it is bent to evil or runs to good with more zeal or with less than it ought against the Creator his own creature is working Hence thou canst comprehend that love is of necessity the seed in you of every virtue and of every action that deserves punishment

Dostoevsky offers us further thoughts concerning the relation of love and sin In the *Brothers Karamazov* Father Zossima makes lack of love the punishment as well as the substance of sin To those who ask What is Hell? Father Zossima replies I maintain that it is the suffering of being unable to love They talk of hell fire in the material sense I don t go into that mystery and I shun it But I think if there were fire in the material sense they would be glad of it for I imagine that in material agony their still greater spiritual agony would be forgotten for a moment Oh there are some who remain proud and fierce even in hell in spite of their certain knowledge and contemplation of the absolute truth there are some fearful ones who have given themselves over to Satan and his proud spirit entirely For such hell is voluntary and ever consuming they are tortured by their own choice For they have cursed themselves cursing God and life

To avoid sin the only positive commandment according to Father Zossima is to love in accordance with God s love Love a man even in his sin he counsels for that is the semblance of Divine Love and is the highest love on earth And let not the sin of men confound you in your doings Fear not that it will wear away your work and hinder its being accomplished There is only one means of salvation then take unto yourself and make yourself responsible for all men s sins that is the truth you know friends for as soon as you sincerely make yourself responsible for everything and for all men you will see at once that it is really so and you are to blame for every one and for all things But throwing your own indolence and impotence on others you will end by sharing the pride of Satan and murmuring against God Of the pride of Satan what I think is this it is hard for us on earth to comprehend it and therefore it is so easy to fall into error and to share it even imagining that we are doing something grand and fine

In the disorder of love which leads to sin sin is itself enjoyed for its own sake and the disobedient act is pleasant because it is forbidden In that also there is the pride of supposing one s self to be a law unto one s self In his *Confessions* concerned most immediately with his own sinfulness Augustine reflects upon the pears he stole in his youth not as he says from any desire to enjoy the things I stole but only the stealing of them and the sin He asks himself What was it then that in my wretched folly I loved in you O theft of mine deed wrought in that dark night when I was sixteen? He had no need of the pears Once I had gathered them he says I threw them away tasting only my own sin and savouring that with delight for if I took so much as a bit of any one of those pears it was the sin that sweetened it

He keeps on asking himself what it was that attracted him in that theft what it was that

he enjoyed in that childish act of stealing Perhaps he finally answers it was the thrill of acting against Your law—at least in appearance since I had no power to do so in fact the delight a prisoner might have in making some small gesture of liberty—getting a deceptive sense of omnipotence from doing something forbidden without immediate punishment I was that slave who fled from his Lord and pursued his Lord s shadow O rottenness O monstrousness of life and abyss of death! Could you find pleasure only in what was forbidden and only because it was forbidden?

IN THE PAGAN AND Judaeo Christian conceptions of sin the fundamental meaning seems to depend upon the relation of man to the gods or to God whether that itself be considered in terms of law or love The vicious act may be conceived as one which is contrary to nature or reason The criminal act may be conceived as a violation of the law of man injurious to the welfare of the state or to its members Both may involve the notions of responsibility and fault Both may involve evil and wrongdoing But unless the act transgresses the law of God it is not sinful The divine law which is transgressed may be the natural law that God instills in human reason but the act is sinful if the person who commits the act turns away from God to the worship or love of other things

To disbelieve in God in divine law and divine punishment is also to disbelieve in sin—at least in the sense in which religious men have distinguished between saints and sinners between the righteous and the wicked in the eyes of God There are only two kinds of men writes Pascal the righteous who believe themselves sinners the rest sinners who believe themselves righteous

Those who reject the religious meaning of sin do not deny the wide prevalence of a sense of sin nor do they deny that many men suffer remorse for transgressions which they suppose to be evil in God s eyes but with Freud they interpret these feelings of guilt in terms of natural causes They hold that the person who is tormented by conscience suffers from an illusion concerning the true nature of his guilt When the sense of sin is intensely active and is in addition apparently unexplained by the character and conduct of the person the guilt feelings according to the Freudian view take on the attributes of pathological distortion and become part of the symptomology of the neuroses There is no question about the sincerity of the person who is thus agonized but only about the true causes of the agony

When one asks how a sense of guilt arises in anyone Freud says one is told somethin one cannot dispute people feel guilty (pious people call it sinful) when they have done something they know to be bad But then one sees how little this answer tells one What accounts for the judgment a man makes of himself as good or bad? Freud s answer is that what is bad is to begin with whatever causes one to be threatened with a loss of love because of the dread of this loss one must desist from it That is why it makes little difference whether one has already committed the bad deed or only intends to do so

The external authority of the father and through him of society becomes according to Freud internalized by the development of a super ego The manifestations of conscience are then raised to a new level to be strict one should not call them conscience and sense of guilt before this At this second stage of development conscience exhibits a peculiarity which was absent in the first That is the more righteous a man is the stricter and more suspicious will his conscience be so that ultimately it is precisely those people who have carried holiness farthest who reproach themselves with the deepest sinfulness A relatively strict and vigilant conscience is the very sign of a virtuous man and though saints may proclaim themselves sinners they are not so wrong in view of the temptations of instinctual gratifications to which they are peculiarly liable—since as we know temptations do but increase under constant privation whereas they subside at any rate temporarily if they are sometimes gratified

Freud applies his theory of the origin of feelings of guilt (in the dread of authority first and later in the dread of the super-ego) to the religious sense of sin The people of Israel he writes believed themselves to be God s favorite child and when the great Father hurled visitation after visitation upon

th m it still never shook them in this belief or caused them to doubt His power and His justice they proceeded instead to bring their prophets into the world to declare their sinful ness to them and out of their sense of guilt they constructed the stringent commandments of their priestly religion

In general Freud thinks the great religions have never overlooked the part played by the sense of guilt in civilization What is more they come forward with a claim to save man kind from this sense of guilt which they call sin We have drawn our conclusion from the way in wh ch in Christianity this salvation is won—the sacrificial death of one who therewith takes the whole of the common guilt of all upon himself about the occasion on which this pri mal sense of guilt was first acquired The con clusion referred to is developed in two of Freud s works which are devoted to the con sideration of religion and sin—the *Future of an Illusion* and *Totem and Taboo* In the latter of these books Freud tells us he had first ex pressed a suspicion that perhaps the sense of guilt in mankind as a whole which is the ulti mate source of religion and morality was ac quired in the beginning of history through the Oedipus complex

OTHER WRITERS who approach the problem of sin in legalistic rather than psychological terms either make no distinction between crime and sin or make the distinction without referring to God Spinoza for example prefaces his expla nation of the meanings of praise and blame merit and crime with a discussion of the dif ference between the natural and civil state of man In a state of nature he says no one is bound by any law to obey any one but him self Hence in a natural state sin cannot be con ceived but only in a civil state where it is de cided by universal consent what is good and what is evil and where everyone is bound to obey the State Sin therefore is nothing but d sobedience which is punished by the law of the State alone

Though Hobbes does not identify cr me and sin h s distinction between them does not seem to be based on the contrast between the civil law and the divine law unless the latter is equated with the la v of nature A crime is a sin he writes consisting in the committing (by deed or word) of that which the law for biddeth or the omission of that which it hath commanded So that every crime is a sin but not every sin a crime To intend to steal or kill is a sin though it never appear in word or fact for God that seeth the thoughts of man can lay it to his charge but till it appear by something done or said by which the intention may be argued by a human judge it hath not the name of crime

From this relation of sin to the law Hobbes continues and of crime to the civil law may be inferred first that where law ceaseth sin ceaseth But because the law of nature is eternal violation of covenants in gratitude arrogance and all facts contrary to any moral virtue can never cease to be sin Secondly that the civil law ceasing crimes cease for there being no other law remaining but that of nature there is no place for accusa tion every man being his own judge and ac cused only by his own conscience and cleared by the uprightness of his own intention When therefore his intention is right his fact is no sin if otherwise his fact is sin but not crime

The more strictly rel gious conception of sin seems to be exemplified by Pascal s remark that all that God does not permit is forbidden and that sins are forbidden by the general declaration that God has made that He did not allow them Whatever God does not permit we ought to regard as sin for the absence of God s will which is all goodness and all justice renders it unjust and wrong

With the precision of a theologian in these matters Aquinas defines the peculiar type of evil which is sin Evil he writes is more comprehensive than sin as also is good than right Now in those things that are done by the will the proximate rule is the human rea son while the supreme rule is the eternal law When therefore a human act tends to the end accord ng to the order of reason and of the eternal law then that act is right but when it turns aside from that rectitude th n it is sa d to be a sin Elsewhere he says that every *created will has rectitude of act only so far as it* is r gulated ac o d ng to the d vine will Thus only in the d v n w ll can there be no sin

whereas in the will of every creature considered according to its nature there can be sin

THE THEOLOGICAL DISCUSSION of sin involves a tremendous range of topics and problems as significant as they are subtle The dogma of original sin for example raises questions not only about the cause and character of Adam s transgression but also about the punishment which is visited upon the children of Adam in perpetuity and about the conditions under which man can be reclaimed from his bondage to sin both original and actual or personal

There seems to be some resemblance between the Christian doctrine that Adam s sin merits a penalty to be paid by all subsequent generations and the Jewish doctrine of the collective responsibility of the people of Israel for the sins of their ancestors even unto the third and fourth generation But the points of difference appear to be more fundamental than the similarity

In the first place the sins of the fathers from which later generations suffer are the individual sins of men whose natures are predisposed to sin as Adam s before the fall was not In the second place the punishment is visited not upon the whole human race but only upon the Chosen People and in the form of temporal scourges rather than in a corruption of human nature itself

Furthermore the Hebrew prophet Ezekiel questions the justice of collective responsibility What mean ye he asks

that ye use this proverb concerning the land of Israel saying The fathers have eaten sour grapes and the children s teeth are set on edge?

As I live saith the Lord God ye shall not have occasion any more to use this proverb in Israel

The soul that sinneth it shall die The son shall not bear the iniquity of the father neither shall the father bear the iniquity of the son the righteousness of the righteous shall be upon him and the wickedness of the wicked shall be upon him

But if the wicked will turn from all his sins that he hath committed and keep all my statutes and do that which is lawful and right he shall surely live he shall not die

All his transgressions that he hath committed they shall not be mentioned unto him in his righteousness that he hath done he shall live

Have I any pleasure at all that the wicked should die? saith the Lord God and not that he should return from his ways and live?

But when the righteous turneth away from his righteousness and committeth iniquity and doeth according to all the abominations that the wicked man doeth shall he live? All his righteousness that he hath done shall not be mentioned in his trespass that he hath trespassed and in his sin that he hath sinned in them shall he die

According to Christian teaching the justice of individual punishment for the sins which individuals commit in their own lifetime does not apply to the penalty which all men must pay for the sin of Adam Wherefore as by one man sin entered into the world St Paul writes to the Romans

and death by sin and so death passed upon all men for that all have sinned

(For until the law sin was in the world but sin is not imputed when there is no law

Nevertheless death reigned from Adam to Moses, even over them that had not sinned after the similitude of Adam s transgression who is the figure of him that was to come

But not as the offence so also is the free gift For if through the offence of one many be dead much more the grace of God and the gift by grace which is by one man Jesus Christ hath abounded unto many

And not as it was by one that sinned so is the gift for the judgment was by one to condemnation but the free gift is of many offences unto justification.

For if by one man s offence death reigned by one much more they which receive abundance of grace and of the gift of righteousness shall reign in life by one Jesus Christ)

Therefore as by the offence of one judgment came upon all men to condemnation even so by the righteousness of one the free gift came upon all men unto justification of life

For as by one man s disobedience many were made sinners so by the obedience of one shall many be made righteous

The Christian doctrine of original sin thus appears to be closely connected with the Christian doctrine of the need for a divine saviour —God Himself become man to redeem man from the taint of sin and through the sacraments He instituted to provide the instruments of healing grace and the means of repentance for and absolution from both original sin and the individual s own personal sins.

The understanding of the sacraments the theory of grace in relation to the original and fallen nature of man the issue concerning grace and good works, or God s justification and man s merit in the achievement of sanctity and salvation the distinction between the ever lastin perdition of Hell and the expiatory punishments of Purgatory—all these funda mental theological problems are involved in the consideration of sin and its consequences both temporal and eternal

Some of these problems are discussed in the chapters on MAN ANGEL, IMMORTALITY and PUNISHMENT Other matters such as the clas sification of sins according to the distinction between spiritual and carnal mortal and venial and the enumeration of the various species of both mortal and venial sin in the order of their gravity are problems of moral theology Thou h they belong primarily to this chapter they are also related to the classification of virtues and vices especially to the theory of the theological virtues and among the theological virtues especially to charity which is the princ ple of sanctity even as pride is the pr nciple of sin

Of all points in the consideration of s n the distinct on between original and acquired sin is perhaps the most important not only because inherited sinfulness is conceived as the predis posing cause of all other sins but also because the human nature corrupted by sin is con ceived as fallen below the perfection of a purely natural man as well as below the state of grace in which Adam was created As Adam had gifts which made him superior to the natural man—immortality infused knowledge and freedom from error immunity from concupiscence ex emption from labor and servility—so the chil dren of Adam cast out of Eden have ingrained weaknesses which make them unable to achieve the goods or attain the ends proportionate to their human nature

Accord ng to some th ologians the purely natural man without eithe the gifts of grace or the wounds of sin has never existed It is this mystery of man having natural aspirations wh ch exceed the weakened powers of his f llen nature that Pascal se ms to contemplate n all hi observations on the g eatness and wretch edness of man —the astonishing contradic tions which he thinks only the Christian re ligion explains In the state in which men now are he writes there remains to them some feeble instinct of the happiness of their former state and they are plunged in the evils of their blindness and their lust which have become their second nature

As the result of original justice Aquinas writes the reason had perfect hold over the lower parts of the soul while reason itself was perfected by God in being subject to Him Now this same original justice was forfeited by the sin of our first parent so that all the powers of the soul are left as it were destitute of their proper order whereby they are nat urally directed to virtue This destitution is called a wounding of nature In so far as the reason is deprived of its order to the true there is the wound of ignorance in so far as the will is deprived of its order to the good there is the wound of malice in so far as the irascible is deprived of its order to the arduous there is the wound of weakness and in so far as the concupiscible is deprived of its order to the delectable as moderated by reason there is the wound of concupiscence Accordingly these are the four wounds inflicted on the whole of human nature as a result of our first parent s sin

Aquinas rejects the supposition that the entire good of human nature can be destroyed by sin arguing that what sin diminishes is the natural incl nation to virtue which is befitting to man from the very fact that he is a rational being But sin cannot entirely take away from man the fact that he is a rational be ng for then he would no longer be capable of sin

Other theologians take a more extreme view than Aquinas and Augustine They attribute depravity rather than weakness to human na ture as a consequence of o iginal sin On the Calvinistic theory Mill writes the one great offense of man is self will Under the maxim that whatever is not a duty is a sin men are left w th no cho ce Human nature being radically corrupt M ll continues there is no r demption for any one until human nature s killed within h m But o ding to August ne a d Aquinas original s n doe not deprive the ind vidual man ent ely of th power to estab-

lish his worth though it puts him in need of God s help to be worthy of salvation Between the one extreme which holds that men can be saved by God s grace alone and the other extreme which supposes that men can win salvation by the merit of their own good works, Augustine and Aquinas try to take the middle position according to which neither grace without good works nor good works without grace will avail

OUTLINE OF TOPICS

1 The nature of sin violation of divine law disorder in man s relation to God

2 The kinds and degrees of sin

- *2a* The distinction between original and actual sin
- *2b* The distinction between spiritual and carnal sin
- *2c* The distinction between mortal and venial sin
  - (1) The classification and order of mortal sins
  - (2) The classification and order of venial sins

3 The doctrine of original sin

- *3a* The condition of Adam before sin his supernatural state of grace his preternatural gifts
- *3b* The sin of Adam
- *3c* The nature of fallen man in consequence of Adam s sin
- *3d* The need for a mediator between God and man to atone for original sin
- *3e* The remission of sin baptism the state of the unbaptized

4 Actual or personal sin

- *4a* The relation of original sin to actual sin
- *4b* The causes and occasions of actual sin
- *4c* Pride as the principle of sin the tragic fault of *hybris*
- *4d* The consequences of actual sin the loss of charity and grace
- *4e* The prevention and purging of sin purification by sacrifice the sacrament of penance contrition confession and absolution

5 The remorse of conscience and feelings of guilt the psychogenesis and pathological expression of the sense of sin

6 Guilt and the punishment of sin

- *6a* Man s freedom in relation to responsibility and guilt for sin divine predestination or election
- *6b* Collective responsibility for sin the sins of the fathers
- *6c* The temporal punishment of sin divine scourges
- *6d* The eternal punishment of sin the everlasting perdition of the unrepentant in Hell
- *6e* The purifying punishments of Purgatory

7 Grace and good works in relation to salvation from sin

REFERENCES

To find the passages cited u e the numbers in heavy type which are the volume and p ge numbers of the passages referred to Fo example in 4 HOMER *Il d* BK II [265 283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the pas sage is in section d of page 12

PAGE SECTIONS When th text is printed in one column the letters a and b refer to the upper and lower halves of the page For exampl n 53 JA IES *Psychology* 116a 119b the passa e beg ns in the upper h lf f page 116 and ends in the lower half of page 119 When the text is print d in two columns the letters a a d b refer to the upper and lower halves of the l ft hand side of the pa e the letters c and d to the upper a d lower halves of the right hand side of the page For example in 7 PLATO *Symp sium* 163b 164c the passage begins in the lo ver half of the left hand s de of page 163 and ends in the uppe h lf of the r ght h nd s de of p e 164

AUTHOR S D V IONS One or more of the ma n d vis ns of a wo k (such as PART BK CH SECT) are somet mes included n the reference line numbers in brackets are given in cer tain cases *e g Iliad* BK II [65 283] 12d

B BLE R FERENCES The referenc s are to book chapter and verse When the King James and Douay version diff r in title of books or in the numbering of chapters or verses the King James version is c ted fi t and the Douay indicated by a (*D*) foll ws *e g* OLD TESTA MENT *Nehem h* 7 45—(*D*) *II Esd as* 7 46

SYMB LS Th bb evi t on sp calls the reader s attention to one or more especially rel ant parts f a whole reference p m sign fi s that the topic is d cus ed intermit tently rath than continuously in the work or pas age c ted

For additional information concerning the style of the references see the Explanat n of Reference Style for general guidance in the use of *The Great Ideas* consult the Preface

1 The nature of s n violation of d ine l w disorde in m n s relation to God

O D T STAM NT *Gen s s* 5 7 3 esp 3 11 4 7 6 1 13 / *Exodus* 2 1–17 / *Deuter n my* 5 6-21 / *J b* 35 6 / *Psalms* 36 1 4—(*D*) *P lms* 35 –5 / *Isa ah* 59 2—(*D*) *Is as* 59 2
N w T ST ENT *Matthew* 4 1 11 / *Luk* 4 1–13 / *J hn* 8 34 9 3 15 22 / *R ma s* 5 13 19–1 6 7– 4 23 7 7– 14 23 / *I C rinthians* 15 55–56 / *Jame* 1 15 4 17 / *I John* 3 4–8 5 17

4 HOMER *Il ad* BK I [91-147] 4a c BK IX [485–526] 62 b

5 AE CI YLUS *P om theus Bound* 40a 51d / *Ag memn n* [355–398] 55d 56b [905–957] 61 62b / *Eumen de* [490–565] 86b-87a

5 SO HOCL S *A t go* 131a 142d / *Ajax* 143a 155 c

5 EUR ES *H pp lytus* [–57] 225a-c / *Electra* [907–956] 335b d / *Ba h tes* 340 352 c esp [1302 351] 351 -c / *Iphigen t A l s* [1146–1 1] 435 -436a

12 AUR LIUS *M dutat s* BK X SECT 1 291 -c

17 PLOTINUS *Th d E n ad* TR II CH 88a b

18 AUGUSTIN *Co f ons* K II pa 9– 4 10d 12b K pa 15 7 17a 18 K V par 2 27b BK VI par 2 50a / *City f God* BK X CH 3 343d 344b K X V CH 3 4 378a 379a CH 10–15 385b 390a BK XV CH 22 416a c

19 AQUINAS *Summa Theolog a* PART I Q 63 325b 333d PART I–II Q 1 A 7 REP 1 614c 615 Q 21 A 1 717a d A 4 719d 720a c Q 34 A 1 ANS 768c 769d

20 AQUINAS *Summa Theol gica* PART I II Q 71 105c 111b Q 7 A 2 AN 112b 113a A 4 114a 115a A 5 AN 115a 116b Q 73 A 1 119 120c Q 74 128d 137c Q 91 A 4 ANS 210c 211 PART I I Q 8 AA 7–8 761d 763b

21 DANTE *Di ne Com dy* HELL, III [1 18] 4a b XI 15a 16b XXVII [55 132] 40a 41a PUR A TORY XVI [5 4] 77b 78a XV [91] XVI [75] 79b 80c XXX–XXX 99b-102b P XXX [96] XXX [63] 100b-101 P RA 1 [94 4] 107b d [6] 115b 1116b

22 C IAUC R *P o s Tale* par 9 507b 508a p 509a b p 3 516a p 34 519b par 35 43 520b 524a passim pa 53 526b p 63 530a b par 70 534b p 74 535b par 85 543a

23 HO B S *Levi than* ART I 85d PA 1 138d 139 142 d 149b

25 MONTAIGNE *Ess ys* 233b

30 BA ON *Adv cement f Le rn g* 80d 81a 100d

31 D S AR S *M dit t* 73d 74a / *Objec t n nd Repl* 125d 126

3 The doctrine of original s n

OLD TESTAMENT *Gen s s* 2 16–17 3 esp 3 17 19
APOCR HA *W sdom of Solomo* 2.23 24—(D) OT *Book of W sdom* 2 23 25
N w TESTAM NT *Romans* 5 esp 5 12 19
18 AUGUSTINE *Confe sio s* BK I par 18 5c d / *C ty of God* BK XII CH 21–22 357a c BK XII CH I 5 360a 366d BK XIV H I 376b d 377a CH 10–16 385b 390b BK XXI CH 12 571a c
19 AQUINAS *Summa Theologica* PART I Q 47 2 ANS 257b 258c
20 AQUIN S *Summa Theolog ca* PART I II QQ 81–83 162d 174b
21 D TE *Dwine Comedy* PURGATORY XXVIII [91–96] 97a XXIX [2 30] 97d 98a XXXI I [52 72] 104d 105a PARADIS VII [16–120] 115b 116b
22 C UCER *Pard er's Tale* [1 432 445] 375a / *Pa n s Tale* par 8 506b 507b
30 B ON *Adva cement of Learn g* 17d 18a 81a / *Nov m Org um* BK A H 52 195c d
31 S IN ZA *Eth s* PART IV PROP 68 S HOL 445a b
32 M TON *P ad Lost* 93a 333a esp BK I [– 26] 93b 94a BK III [80–415] 137a 144b K IV [411 439] 161b 162a [512–52] 163b BK V [28 94] 176a 177 [224 47] 180a b [5 2 553] 186b 187 BK VI I [316–333] 239a b K IX [647 10 4] 261b 269a [1 0–1 33] 271b 272a K X [585–64] 287a 288b [720 844] 290a 292b [1013 1 4] 296b 298b BK X I [386–435] 327b 3 8b / *A p gitica* 394b 395b
33 P C L *Pen ees* 434 435 248a 251a 445–448 251b-253a
37 F LDING *T m J es* 38d
40 G B N *D cl nd Fall* 183b c
43 M L *Liberty* 296b d
46 H G L *Ph l sophy of R ght* INTRO p 18 16 d D TION 14 118 d / *Philos phy f H sto y* RT III 304d 306a
50 MARX *Cap t l* 354b
54 FREUD *W a d De th* 763b c

3 The cond tion of Adam befor n h su pe n tur l state of g ce h pret n tural gifts

O D T STAM NT *Ge e s* 1 27 29 2 7 8 15–25 / *Ec l s st s* 7 29—(D) *E cles ast* 7 3
A R PHA *W sdom f Sol m* 3 14 .23 —(D) OT *Bo k f W1 dom* 1 13 14 2 3 / *Ec l s st us* 17 15—(D) OT *E le ast cu* 17 1 13
18 AUGUSTIN *C ty f God* BK X CH I 329b K XI 2 23 357a 358a BK XI C 360 b CH 3 4 366 CH 19 369 370 BK XIV CH I 376b d 377a H 28 385b-397d pass m K XX I CH 30 617 618a
19 AQUIN *Summ Th l g a* PAR Q 76 A 5 R P I 394 396 QQ 94 10 501c 527 c
20 AQU NA *Summa The logica* PART I II Q 81 A 5 R P 2 167a d Q 89 A 3 200d 201d Q 109 A 2 ANS 339c 340b A 3 CONTRARY and ANS 340c 341b A 4 ANS 341c 342a A 8 ANS and RE 3 344d 346a A 10 R 3 347a d PART II II Q 2 A 7 ANS 396a 397c Q 5 A I ANS 410a 411b PART III Q I A 3 REP I 5 704d 700a
21 DANTE *D ine Com dy* PURGATORY XXVIII [ ] XXIX [36] 96a 98a / PARADISE VII [64–84] 115d 116a X I [31–111] 125d 126c
22 CH UCER *Monk s Tal* [14 013–020] 434b / *Parson s Tale* par 18 506b 507a
23 HO BES *Leviathan* ART III 191b-c 192 b PART IV 250d
31 SPINOZA *Ethics* PART IV PROP 68 SCHOL 445a b
32 MILTON *Parad s Lost* BK I [65 –654] 107b BK III [56–3 1] 136b 143b BK IV [32–538] 153a 164a esp [31–171] 155a 156 [205–39] 157 161a [610–775] 165b 169a BK V [1–560] 175a 187b K VII [40 108] 218a 219b [519–550] 228b 229a [617–632] 230b 231a BK VI I 232a 246b K IX [19 –454] 251b 257 K XI [45 7] 300a b BK XII [63 110] 320b 321b
33 PASCAL *Pens es* 560 272b
46 HEGEL *Philosophy f History* INTRO 179d 180c PART 304d 305a
51 TOLSTOY *Wa and P ace* BK VII 275a

3b Th sin of Adam

OLD TESTAMENT *Gen sis* 3 / *Eccl s a tes* 7.29—(D) *Ecclesiast s* 7 30
A OCRYPHA *Wisd m f Solom n* 1 3 16 2 23–4—(D) OT *Bo k of W sd m* 1 3 16 2 3–25
NEW TESTAM NT *R mans* 5 1
18 AUGUSTIN *C ty of God* K XII CH 1 357a b BK XIII H I 360a b CH 12 15 365d 366d BK XIV CH I 15 385d 390a BK XXI CH 12 571a c BK XXII CH 24 609a b
20 AQUIN *S mma Theol gica* P T I–II Q 81 A 5 167a d Q 82 A 2 REP 168d 169 Q 89 A 3 200d 201d
21 D N E *D in Comedy* PURGATORY XXVIII [91–96] 97a XXIX [2 3] 97d 98a PARADISE VII [6– 0] 115b 116b XXVI [9–117] 147a
22 CH UCER *P d ner s Tal* [12 432 445] 375a / *Mo k Tale* [4 013–020] 434b / *Pars n s Tale* p 8 507a b
23 HOBB S *Lev th* PART 112a b PART III 177d 191b c 195d
25 MON N *Es ys* 233b
30 B CON *Adva ement of Learn g* 81a
31 SP NO A *Ethics* PART IV PROP 68 SCHO 445a b
32 M TON *Pa d se Lost* BK I [27–75] 94 95 BK I I [167 16] 139 140a [74 94] 141b K IV [5 5–535] 163b 164 K IX [647 004] 261b 269 / *A eop g t a* 394b 395
33 P S AL *P ci l Letter* 82 b
46 H L *Ph l phy f H t ry* P RT III 304d 305b

(3 *The doctrine of original s n*)

3c The nature of fallen man in conseq ence of Adam s s n

OLD TESTAMENT *Genesis* 3 9 24 6 5 13 8 21 / *Job* 15 14 16 25 4-6 / *Psalms* 14 1 3 39 5-6 11 51 2-5 53 1-3—(D) *Psalms* 13 1 3 38 6-7 12 50 4 7 52 1 4 / *Proverbs* 20 9 / *Ecclesiastes* 7 20 27 29 9 3—(D) *Eccles astes* 7 21 28 30 9 3 / *Jeremiah* 17 9—(D) *Jeremias* 17 9

APOCRYPHA *Wisdom of Solomon* 2 23-24—(D) OT *Book of Wisdom* 2 23 25

NEW T STA IENT *John* 8 3 8 / *Romans* 3 9-5 21 esp 5 12 21 7 8 20 21 9 29 / *I Corinthians* 15 21 22 / *Galat ans* 2 16 3 esp 3 11 3 22 4 1 7 5 19 21 / *Ephes ans* 2 1-5 / *I John* 2 15 17

18 AUGUSTINE *Confessions* BK I par 18 5c d / *City of God* BK XII CH 21 22 357a c K XIII CH 1 15 360 366d BK XIII CH 23 K XIV CH 5 372a 380b BK XIV CH 12 13 387a 388c CH 15 27 388d 397a BK XXI CH 12 571a c CH 15 572c 573b BK XXII CH 22 606d 608b CH 30 617c 618a

19 AQUIN S *S mma Theologica* PART I Q 97 A 1 REP 3 513c 514c Q 98 A 2 517d 519a PART I II Q 17 A 9 REP 3 692d 693d

20 AQUINAS *Summa Theolog a* PART I II QQ 81-83 162d 174b Q 85 178b 184a Q 91 A 6 212c 213c Q 94 A 6 REP 1 2 225d 226b Q 109 A 2 ANS 339c 340b A 3 ANS 340c 341b A 8 ANS 344d 346a PART III Q 8 A 5 REP 1 760a d QQ 14 15 784a 796a

21 DANTE *Divine Comedy* PURGATORY III [16-45] 56a b X [121 129] 68c d XXVIII [91-96] 97a XXIX [16-30] 97d 98a PARAD SE VII [16-120] 115b 116b

22 CH UCER *Tale of Man of Law* [4778 4791] 240b 241a / *Pa doner s T le* 374a 382b esp [12 432 445] 375a [12 829-837] 381b / *Parson s Tale* pa 18 507b

23 HOBB S *Leviathan* PART II 112a b PART I I 191b-c 192a 195d

24 R B LAI *G rg ntua and Pantagru l* BK II 81a b

25 MONT IGNE *Es a* 213a 215b 218c 219a 233a 234a 238b 239c 250a b 294a b

30 B CON *Novum O ganu* BK II AP I 52 195c d

32 MILT *Pa adise Lost* BK III [167 216] 139a 140a [274 3 4] 141b 142a BK IX [780-1189] 264b 273a BK X 274a 298b esp [103 123] 276b 277a [229 409] 279b-2 3 [585-64] 287a 288b [2 -844] 290 2 2b BK XI [84 98] 301a [162 80] 302b- 03a [2 1 262] 304b 305 BK XI [423]-BK X I [371] 308b 327a

33 PASC L *Prov nc al Let* 7 82a / *Pensé s* 426-42, 244b 430-431 2 247b 434 435 248a 951 50 251a 253a 560 272b [52 114] 77b 1 38d

22 CHAUCER *Pa so s Tale* 1 193b c

44 BOSWELL *Johnson* 482a

46 HEGEL *Philosophy of Right* ADDITIO 14 118c d / *Philosophy of History* P RT III 304d 305b PART IV 354a c

50 MARX *Capital* 354b

51 TOLSTOY *War and Peace* BK VII 275a

3d The need for a mediator between God and man to atone for original sin

NEW TESTAMENT *Matthew* 1 21 9 2 6 18 11 14 26 26 28 / *Mark* 2 3 11 / *Luke* 1 67-69 2 11 5 0-24 7 37-50 9 56 19 1 10 24 44 47 / *John* 1 29 3 16-17 4 42 6 31 39 10 9-18 14 18 19 / *Acts* 3 19-26 4 10-12 5 30-31 10 37-43 13 23 6 32 39 16 30-31 / *Roma s* 1 16 3 20-26 5-6 8 1 11 31 39 9 29 10 21 / *I Corinthians* 5 7 15 1 4 12 23 55 57 / *II Corinthians* 5 14 21 / *Galatians* 1 3 4 2 16-21 3 19-27 5 1-5 / *Ephesians* 1 5 7 12 14 2 / *Coloss ans* 1 12-15 19 24 2 11 15 3 1 10 / *I Timothy* 1 15 2 5-7 / *II Timothy* 1 8 10 / *Titus* 3 4-7 / *Hebrews* 1 1 3 2 9-18 5 7 10 22 12 24 13 12 / *I Peter* 1 7-9 18 21 3 18 4 1 / *I John* 2 1 2 12 3 5 10 / *Revelation* 1 4-6—(D) *Apocalypse* 1 4-6

18 AUGUSTINE *Confessions* BK VII par 24 50d 51a / *City of God* BK IX C 1 1 18 285b d 295d esp CH 15 17 293a 295c BK X CH 22 312a b CH 24 25 312d 314c BK XI C 1 2 3 323a d BK XIII CH 2 4 360b 362a CH 23 24 372a 376a c K XVII CH 11 462c 463 BK XXI CH 16 573b 574a / *Christian Doctrine* BK I CH 14 18 627d 629a CH 34 634b c BK II CH 41 656a c

19 AQUIN S *Summa Theologica* PART I Q 9 A 1 REP 3 513c 514c PART I II Q 5 A 7 REP 2 642a d

20 AQUIN S *Summa Theolog ca* PART I II Q 100 A 12 264d 265d Q 103 A 2 299b 300d PART III PROLOGUE-Q 1 701 709c Q 3 A 8 729b 730b Q 22 A 3 829c 830c

21 DANTE *Di e Comedy* PA ADISE 1 [92-93] 114c VII [19 12] 115b 116b

22 CH UC R *P doner s Tale* [12 834-83] 381b / *P rso s Tale* p r 87 545a

23 HO BE *Leviathan* P T III 191c d 197d 198a 204a c

32 MILTON *Chr ts Na ti ty* [1 14] 1a b [125 156] 4b 5a / *The Passion* 10b 12a / *Upon the C cumci ion* 12b 13 / *Pa ad se Lost* 93a 333a esp BK I [1 26] 93b 94a BK III [56-415] 136b-144b BK XI [1 44] 299a 300a BK XII [285 484] 325b 329b

33 P SCAL *Pensées* 430 245a 247b 527-550 264b 267b 556 270b 272a 560 272b 693 300b 301 780-783 324b 325a

44 BO WELL *J h* 482 d

46 H GEL *Philos phy of History* PART III 306b c P RT IV 331d 333b

52 DO TO SKY *B others Karamazov* BK V 127b-137c pa m

54 FREUD *C il at on and Its D co tents* 797b-c

3e The remi s on of sin baptism the st te of the unb ptized

NEW TEST M NT *Matthew* 3 11 17 28 19 / *Mark* 1 4 8 16 6 / *Lu k* 3 3 16 / *John* 1 25-26 33 3 5 / *Acts* 1 5 2 38 41 es 2 38 3 19 8 35 38 10 43 48 11 16 19 -5 22 6 / *Rom* s 3.20-26 5-6 8 1-11 9 9-10 0 / *I Cori thians* 12 13 / *II Cori h ans* 5 14 19 / *Gal tians* 3 19 27 / *Ephesians* 2 4 5 / *Colos* s s 2 8-15 / *Titus* 3 5 7 / *Hebrews* 6 1-6 / *I Peter* 18 3

18 AUGU TIN *Conf ss o s* BK I par 6 2b c par 17 18 5b d BK II par 15 12b c BK IV par 7-8 20d 21b / *City f God* BK X CH 22 12 b K XII C I 2 357 BK X II CH 7 362d 363b K XXI CH 16 573b 574a

19 AQUINAS *Summa Theolog ca* PART I Q 97 A I RE 3 513c 514c

20 AQUIN S *S mma Theologica* PART I-II Q 8 A I ANS 163a 164d Q 89 A 6 ANS 203b 204 C Q 13 360d 370b PART III Q 3 A 8 AN and REP 3 729b 730b Q 65 A ANS 879 881d A 4 ANS 883d 884a c PART III S P L, Q 69 AA 4-7 889c 893c

21 D NT *Divine Comedy* HELL IV 5 7a PUR G TORY VII [-36] 62 d XXII [55-93] 87a c P RADI E XIX [22 111] 135b 136 XX [3 -148] 137a 138b XXXII [37 84] 155a c

22 CHAU E *Parson s Tale* par 3 496a par 18 19 507b 508a

23 H B ES *Lev atha* PART III 206 207a 211 212b 244d 245a

32 MILTON *Parad e Lost* K XII [436-445] 328b 329a

36 STERNE *Tr st m Sha dy* 221a 224a

40 GI BON *Decl e a d Fall* 297 298b

4 Actual or pe sonal sin

4 The el t on of o ig nal s n to actual sin

NEW T T M NT *Rom* s 3 7-26 5 I I

18 AUGU T E *Conf ns* K p 17-18 5b d / *C ty of G d* K XIV CH 376b d 377a 1 3 378a d

19 AQUIN S *Summ Theol g c* PART I Q 114 A 3 AN 583b d

20 AQU NA *S mma Th ologica* PART I II Q 8 A I NS 16 a 164d Q 89 A 6 203b 204 P RT I Q I A 4 706a 707a

22 CH UCER *Pars n s Ta* p r 18 9 507b-508b

32 MILT N *P ad e Lost* K [67 6] 139 140 [74 343] 141b 143 K X [994 1 8] 269a 271a / *A p tica* 391b 395b

4b The c u es nd o c s on of tual s n

OL T S ENT *Number* 15-7 31 / *J b* I I 5 31 / *Pro erbs* 0- 9 0- 9 pa m 2 4 24 9 28 3 8-9 / *E l si t* 7.26-(*D*) *Ec l t* 7 7 / *Is ah* 5 12 23 8 7-8-(*D*) *I a a* 5 2 3 8 7-8

APO RYP IA *Wi dom of Solomon* 2 esp 2 24 14 2 29-(*D*) OT *B ok f Wisdom* esp 24 5 14.22 29 / *Eccle iasticus* 8 2 10 9 13 11 I 12 13 14 19 2 -3 1 6 13 16 18 25 24 6 29 27 2 10 31 5 11 25-31 47 19- 0-(*D*) OT *Eccles asticus* 8 3 10 9 15 16 11 10 2 13 9 3 23 1-6 17 21 23 5 6 25 33 26.28 -7 2 11 31 5 30-4 47.21 22

NEW TE TA ENT *Matthew* 13 8 23 15 10- 0 / *Mark* 4 1-20 7 4 23 / *Luke* 4 I 3 8 4 15 / *Romans* 1 18-32 6 19 7 22 23 / *I Cor n th ans* 7 4-5 8 9 13 9:27 15 56 / *II C rin thi s* 2 10-11 4 3 4 / *Galatia s* 5 16 I / *Ephes ans* 4 2 / *Colo si ns* 3 5-7 / *I Timothy* 6 9 10 / *II Timothy* 2 5 6 / *Titus* 3 3 / *James* 1 15 2 4 -6 / *I Peter* 4 1 3 5 8-9 / *II Peter* 1 4 2 10 22 / *I Joh* 3 4-9

18 AUGUSTIN *Conf ssio s* BK II par 6 18 10a 13a BK III par 16 17c d K VII par 4-5 44b d BK V II p r 10 11 55c 56b K X par 41-66 81c 88b / *City of God* K I CH 16-27 139 146 K XIV CH 3-6 378a 380 CH 13-14 387c 388d BK XV CH 22 416a c BK XIX CH 6 514b 515a

19 AQU N *Sumn a Theolog ca* PART I Q 48 A 5 REP 3 263a d Q 63 A 7 AN 331c 332b A 8 332c 333b Q 92 A I 3 488d-489d Q 4 581d 585 PART I Q I A 7 R P I 614c 615a Q 42 A 3 802d 803c

20 AQUINAS *Summa Theologica* ART I II QQ 75-84 137 178a

21 DANTE *Divi e Comedy* HELL 1a 52d passim esp XI 15a 16b XIII [3 - 8] 18b-19a XXIV [78] 34d 35b XXV I [55 132] 40a-41a UR TORY 53 105d pa im sp XI 68d 70b XIII [03 29] 73 b XV [4 -81] 75d 76 XVI [52 I 4] 77b 78 XVI [91] XVIII [75] 79b 80 X X [1-69] 81 82 XXX-XXXI 99b 102b PARAD [94 14] 107b d

22 CHAU R *F i s Tale* 278a 284a / *Prologu of Pardo er T le* 372a 374 / *Pardoner s Tale* 374a 382b esp [2 39,-593] 374 377b [12 829-852] 381b / *Tale of M l beus* p r 48-5 421b 425b / *S d Nun s P olog e* [5 469 489] 461a / *P n s Tale* 495a 550a esp p r 3 496 pa 0-86 508b 544a

23 HOBBE *Le i than* P RT I 85d ART II 1 8d 139 151b A T V 272d

26 SH KE A E *2 d Hen y VI* A T V C I [5 90] 66d 67a

27 SH K AR *Haml t* AC I C I [1 9 37] 32d 33 A S [36-7] 53d 54a C IV [44 5] 56 b / *Measure f r Me r* ACT SC II [162 187] 183d 184a S I I [0-39] 184b c ACT I I SC [95 15] 187d 188b / *Oth ll* CT I SC III [60-69] C3 / *Per l* A T I PROL UE SC I 421b 4 / *Cym l n* ACT III SC IV [76-80] 467 / *Henry VIII* A T II C II [435 457] 573 d

31 DESCA T *Obj ct d Repl s* 125d 126a

32 M LTON *P d Lo t* K V [505-535] 163b 164a BK V [6-94] 175b 177a / *Sams n*

(4 *Actual o personal sin 4b The causes and oc cas ons of actual sin*)

Agonistes [766-842] 356b 358a esp [831 842] 357b 358a
33 PASCAL *Provi cial Letters* 19b 26b 29b 61b 66a 70b 72a 74a 80b 91a 111b pas im 112b 113a / *Geometrical Demonstration* 440a b
47 GOETHE *Faust* PROLOGUE 7a 9b
48 MELVILLE *Moby Dick* 3b 4a
52 DOSTO VSKY *Brothers Karama ov* BK III 53c 54b 64c 67a BK IV 88d 89a

4c Pride as the principle of sin the tragic fault of *hyb is*

OLD TESTAMENT *Numbers* 15 30 / *Job* 31 26-28 33 16-17 35 12 / *Psalms* 10 1-6 12 1 5 101 5—(*D*) *Psalms* 9 1 6 11 1 5 100 5 / *Proverbs* 6 16-17 8 13 11 2 14 3 15 25 16 18 19 18 12 21 4 29 23 / *Isaiah* 2 11 17 10 12 15 13 11 14 4 22 esp 14 11 17 16 6 7 23 9—(*D*) *I aias* 2 11 1, 10 12 15 13 11 14 4 22 esp 14 11 17 23 9 / *Je emiah* 48 6 29-31 5 29-32—(*D*) *Jerem as* 48 26 9 31 50 29-32 / *E ek el* 16 49-50—(*D*) *E e ch el* 16 49-5 / *Daniel* 5 18 20 / *Hosea* 5 5 7 10—(*D*) *Osee* 5 5 7 10 / *Zephan ah* 2 9 10—(*D*) *Soph ias* 2 9-10
A OCRYPH *Tobit* 4 13—(*D*) OT *Tobias* 4 14 / *Eccles asticus* 10 7 18 esp 10 13 11 30-31 13 1 23 4 8 32 12—(*D*) OT *Ecclesi asticus* 10 7 22 esp 10 15 11 32 33 13 1 3 5 8 32 16
NEW TESTAMENT *Luke* 18 10-14 / *Acts* 12 20- 3 / *I Timothy* 3 6 / *James* 4 6-7 / *I Peter* 5 5 / *I John* 2 16
4 HOMER *Iliad* BK I 3a 9a c BK IX 57a 64a c
5 AESCHYLUS *Persians* 15a 26d esp [739-831] 23 24a / *Seven Aga nst Thebes* [375-675] 31b 34b / *P ometheus Bound* 40a 51d esp [1-87] 40a 41a [944 1 93] 50b 51d / *Agam m non* [905-957] 61c 62b
5 SOPHOCL S *Oed pus th K ng* 99a 113a c e p [863-91] 107b c / *Ant gone* [100-147] 132a b / *Ajax* 143 155a c
6 HERODOTUS *H st ry* BK I 8a b K VI 217 BK VII 279d 280a
12 EPICTETUS *Disco rses* K III CH 14 189c 190a
18 A GU TINE *Co f ss ns* BK II par 16 17c d BK V par 3-5 27c 28c BK X par 58-64 86a 87d BK XII par 34 35 107c 108b / *City of G d* BK X I CH 6 345b-c BK XIV C 1 9 384b 385b c 13 15 387c 390a C 1 27 28 396c 397d
20 AQ IN *Summ Theol g a* P RT I II Q 77 A 4 148b 149 Q 84 A 2 175b 176a A 4 NS and REP 4 176d 178a
21 D T *D ne Com d* HELL III [65] IX [103] 11c 13b XIV [43 72] 20a b XXV [1 15] 36b-c PURGATORY X 11 67b 71d
22 CHAU ER *Monk s Tale* 434a-448b esp [13 997 14 012] 434a [14 189-684] 437b-44 a/ *Pa son s Tale* par 23 29 510b 515b
25 MONTAIGNE *Essay* 233b 234a 238b c
27 SHAKESPEARE *Tro lus and C essida* ACT II SC III [122 228] 117a 118a / *Henry VIII* ACT III SC II [350 372] 572c d
32 MILTON *Paradise Lost* BK I 93a 110b e p [27 75] 94a 95a [84 124] 95b 96a [622-66] 107a 108a BK II [1 105] 111a 113b [299 389] 117b 119b BK IV [32 119] 153a 155a [505 535] 163b 164a BK V [600-904] 188b 195a BK IX [99 178] 249b 251a / *Samson Agoni tes* [521-540] 351a b
33 PASCAL *Provincial Letters* 66 b / *Pensees* 430 245a 247b 455 460 253b 254b 492 259b
36 SWIFT *Gulliver* PART IV 183b 184a
37 FIELDING *Tom Jones* 379c 380a
52 DOSTOEVSKY *B others Karama ov* BK IV 83c 84a BK V 130b 135a BK VI 168a c

4d The consequences of actual sin the loss of charity and grace

OLD TESTA IENT *Isa h* 57 21—(*D*) *Isaias* 57 21 / *Jeremiah* 13 23—(*D*) *Jeremias* 13 23
APOCRYPHA *Tobit* 1 10—(*D*) OT *Tobias* 12 10 / *Ecclesiast cus* 19 4 21 2 3—(*D*) OT *Eccles ast cus* 19 4 21 2 4
NEW TESTAMENT *Matthew* 27 3-5 / *John* 8 34 / *Romans* 1 16 32 7 5 13 / *Hebrews* 3 13 / *James* 1 15 / *II Peter* 2 18 22
18 AUGUSTINE *Confessions* BK X pa 65-66 87d 88b / *City of God* BK XII CH 3 343d 344b BK XIV C 13 378a b CH 8-9 381c 385b CH 12 15 387a 390a BK XIX CH 13 519a 520a
19 AQUINAS *Summa Theol gica* PA T 1 Q 64 A 1 3 334a 337c Q 114 A 3 583b d
20 AQU NAS *Summa Theol gica* P RT I II QQ 85-87 178b 192d Q 89 A 1 199 c Q 93 A 6 225d 226b Q 109 338a 347d passim P RT II II Q 24 A 12 499c 500d
21 D NTE *Di ine Com dy* HELL 1a 52d PURGA TORY II [18 133] 55d XI 68d 70b
22 CH UCER *Parson s Tale* par 53 526b 527a
32 MILTON *Parad se Lost* BK XI XII 299 333a
33 PAS AL *P ov cial Letters* 19b 26b 28b 31b 36a 61b 132a b 137a

4e The pr vention and purging of s n p r ification by sacrifice the sacrament of penance contrition confess on a d absolution

OLD TESTAMENT *Exodus* 29 36-3 30 10-16 / *Levit cus* pas im e p 4-6 16 5 34 / 11 19 20-22 3 26 32 26 39 43 / *Numbers* 5 5-9 6 9 12 8 19 15 22 9 16 46-48 19 1 19 25 1 13 / *Deu teron my* 21 1-9 / *II Sam el* 12 7 23—(*D*) *II K ngs* 12 7 23 / *I Ki* 8 31-5 —(*D*) *III K gs* 8 3 -50 / *II Chr* le 6 24 42 7 12 14 29 21 24 33 12 19—(*D*) *II P al p menon* 6 24 42 7 12 14 29 21 24

5 The remorse of conscience and feel ngs of guilt the psychogenesis and p tholog c l exp es ion of the sense of sin

(5 *The remorse of con c ence and feel ngs of guilt the psychogenesis and pathological expres sion of the sense of s n*)

26 SHAK SPEARE *2nd Henry VI* ACT III SC III 55d 56a / *R chard III* ACT I SC IV [1 75] 114d 115b ACT V SC III [177 206] 145c d / *Titus A dronicus* ACT V SC I [73 85] 193a SC III [184 190] 198c / *R cha d II* ACT V SC VI [30 52] 351c d / *K ng John* ACT IV SC II [215 248] 396d 397a / *Merchant of Venice* ACT II SC II [1 33] 412a b

27 SHAKESPEARE *Hamlet* ACT II SC II [616-633] 46c d ACT III SC I [44 54] 47b c SC III [36-72] 53d 54a SC IV [88-96] 55c ACT I SC V [10-20] 59d / *King Lear* ACT III SC IV [23 36] 264c / *Macbeth* ACT II SC II 291a 292a ACT III SC II 296b 297a SC IV [60 144] 298b 299b ACT V SC I 306b 307a SC III [37 46] 308a / *Cymbel ne* ACT V SC I [1] SC II [10] 479a c SC III [63-83] 480c d

29 CERVANTES *Don Quixote* PART I 123a b

30 BACON *Advancement of Learning* 96a c

31 SPINOZA *Ethics* PART III PROP 51 SCHOL 411d-412a PART IV PROP 53-54 440b-c

32 MILTON *Comus* [170-229] 37a 38b / *Paradise Lost* BK III [167-216] 139a 140a / *Samson Agon stes* [590-605] 352b

33 PASC L *Provincial Letters* 19b 26b 72a b 73b 80b

35 LOCKE *Human Understand ng* BK I CH II SECT 9 106a d

36 ST RNE *Tristram Shandy* 255a 268a esp 261b 262a

37 FIELDING *Tom Jones* 57c 58a 379c 380c 398d 399a

40 GIBBON *Decl ne and Fall* 54d 55a

42 KANT *Pra t cal Reason* 306d 307d 333a 334a / *Pref Met physical Elements of Ethics* 374c 379d esp 375b d 379b-d / *Intro Metaphysic f Mo als* 389 b / *Judgement* 593a-d

43 M LL *Ut l tarianism* 458b-459b

46 HEGEL *Philosophy of History* PART III 304c d PART IV 354a-c

47 GO THE *Faust* PART I [3544-3619] 86b-88a [3776-3834] 92a 93b 108b 109b [4405 4612] 110a 114b

49 DARWIN *Descent of Man* 312d 314c esp 313a b

51 TOLSTOY *War and Peace* BK III 115d 116a BK V 215b d K VI 248b 250a 251a b BK VII 275a 301b d BK VIII 320b 323a BK I 3 0c 372a 373b 374d BK X 406 -410c 416c 417b 465c-467a BK X 505a 511b p s m esp 509b 511b BK XII 549d 551c BK XIV 598d 599 606b 607a EP LOGUE II 689b

52 D S OEVSKY *Brother K ama ov* BK II 24a-c BK V 95b-109 e p s m BK VI 157b-164a BK VIII 217c 218c BK XI 317b 320 337a 346a EP LOGUE 401 -408a

54 F *Interpretat n f D e ms* 247d 248b / *Gener l Introduction* 582a b / *G oup Psychology* 690c 691c / *Ego and Id* 703b-c 706b-707c 712a 715c / *War and Death* 763b c / *C ili ation and Its Di conte ts* 792a 799a esp 792b 794a 795c 796b 797c 798c / *New I troductory Lectures* 831b 852a d

6 Guilt and the punishment of sin

6a Man s freedom in relation to responsibility and guilt for sin divine predestination or election

OLD TESTA ENT *Genesis* 3 / *Deuteronomy* 30 15 0 / *Joshua* 11 19- 0—(D) *J s e* 11 19-20 / *Psalms* 81 11 12—(D) *Psalms* 80 12 13 / *Isaiah* 6 8 10 63 17—(D) *Isaias* 6 8-10 63 17 / *Jerem h* 46.27 28—(D) *Jeremias* 46 27 8

APOCRYPHA *Wisdom of Solomon* 19 4—(D) OT *Book of Wisdom* 19 4 / *Ecclesia ticus* 15 11 20—(D) OT *Ecclesiasticus* 15 11 21

NEW TEST MENT *Matthew* 13 13 15 / *Luke* 2 3 4 / *John* 6 64-66 10 26-29 12 37 40 13 18 7 / *Acts* 4.27 28 7 51 8.25 27 / *Romans* 1 16-32 9 9-24 11 pass m / *Ephe sians* 1 3 12 / *II Thessalonians* 2 11 14—(D) *II Thessalonians* 2 1 14 / *I Peter* 1 1-5

4 HOMER *Il ad* BK VI [342 358] 43c d

5 AESCHYLUS *Choephoroe* 70a 80d esp [269-314] 72d 73b [885 1076] 78d 80d / *Eumenides* 81a 91d

5 SOPHOCLES *Oedipus the King* 99a 113 c / *Oed pus at Colonus* 114a 130a c esp [258 291] 116c d [939 1015] 123a d

5 EURIPIDES *Electra* 327a 339a c esp [1168 1359] 337d 339a c / *O estes* 394a-410d esp [478 629] 398d-400b

12 AURELIUS *Med tations* BK II SECT 11 258a b

18 AUGUSTINE *City of God* BK V CH 9-10 213b-216c BK XII CH 3 343d 344b CH 8 346d 347b BK XIV C I II 12 385d 387b C 1 13 388d 390a BK XV CH I 397b d 398c BK XXII CH I 586b d 587b CH 30 617c 618a

19 AQUINAS *Summa Theologica* P RT I Q 1 A 1 ANS 100d 101d Q 19 A 9 116d 117d Q 23 A 2 REP 4-5 128d 130d Q 23 A 3 134b 135a Q 24 A 3 142d 143c Q 62 A 3 REP 2 319c 320b A 8 REP 3 323c 324a Q 113 A 1 REP 3 576a d PART I II Q 6 A 4 REP 3 647b 648a Q 24 A 3 REP 3 728c 729c Q 42 A 3 A 5 802d 803c

20 AQ INAS *S mma The l g ca* PART I II Q 73 A 6 123d 124c 10 128a d Q 74 128d 137 Q 5 AA 1 2 137d 139b Q 76 A 3 4 142d 144d Q 77 AA 6-7 150a 151c QQ 8-8 152b-162d P RT II II Q 186 A 10 662b 663b

21 D NTE *Di ne Comedy* PUR ATORY X I [52 114] 77b 78 XVIII [1-75] 79d 80 P R D E I [94 142] 107b d IV [64 114] 111b d XIX [2 111] 135b 136 XX [31 148] 137a 138b

25 MO AI NE *Es ays* 250a

30 BA ON *Adva cement of Learni g* 17d 18a

31 DESCARTES *Meditations* IV 89a 93a passim, esp 91b
32 MILTON *Paradise Lost* 93a 333a esp BK III [80-134] 137a 138a [167-216] 139a 140a [274-302] 141b 142a BK IV [505-535] 163b 164a BK V [224-245] 180a b [506-543] 186a 187a BK X [615-640] 287b 288b / *Samson Agonistes* [23-67] 340a 341a [373-419] 347b 348b / *Areopagitica* 394b 395b
33 PASCAL *Provincial Letters* 19b 26b 155b-157b 158b-159a
35 HUME *Human Understanding* SECT VIII DIV 78-81 485c-487a
42 KANT *Judgement* 594d [fn 1]
47 GOETHE *Faust* PROLOGUE [296-335] 8a 9a
51 TOLSTOY *War and Peace* EPILOGUE II 689b
52 DOSTOEVSKY *Brothers Karamazov* BK V 121a 135
54 FREUD *Interpretation of Dreams* 246 247d / *General Introduction* 581d 582b

6b Collective responsibility for sin: the sins of the fathers

OLD TESTAMENT *Genesis* 3:16-19 / *Exodus* 20:5-6; 34:6-7 / *Numbers* 14:18 / *Deuteronomy* 5:9-10; 24:16 / *II Samuel* 21:1-9—(D) *II Kings* 21:1-9 / *II Kings* 14:1-6—(D) *IV Kings* 14:1-6 / *II Chronicles* 25:4—(D) *II Paralipomenon* 25:4 / *Psalms* 109:1-16—(D) *Psalms* 108:1-16 / *Jeremiah* 31:29-30—(D) *Jeremias* 31:29-30 / *Ezekiel* 18—(D) *Ezechiel* 18
APOCRYPHA *Wisdom of Solomon* 3:1-13—(D) OT *Book of Wisdom* 3:1-13 / *Ecclesiasticus* 4:5-7—(D) OT *Ecclesiasticus* 4:8-10 / *Baruch* 3:7-8—(D) OT *Baruch* 3:7-8
NEW TESTAMENT *Romans* 5:12-19 / *I Corinthians* 15:21-22
5 AESCHYLUS *Seven Against Thebes* 27a 39a c esp [568-614] 33b d [653-956] 34b 37d / *Agamemnon* 52 69d / *Choephoroe* 70a 80d / *Eumenides* 81a 91d
5 SOPHOCLES *Oedipus the King* 99a 113a c / *Oedipus at Colonus* 114a 130 c / *Antigone* 131 142d esp [582-626] 136b c / *Electra* 156a 169a,
5 EURIPIDES *Phoenician Maidens* 378a 393d / *Orestes* 394a 410d
6 HERODOTUS *History* BK VI 203a b BK V 237d 239a 246b c 246d 247a
6 THUCYDIDES *Peloponnesian War* BK I 380a d
18 AUGUSTINE *City of God* BK X CH 2-22 357a-c BK XII CH 3 361 CH 3 372 373 BK XV ... 376b d 37 a ... 20 392b BK XVI CH 7 439a d BK XX CH 2 571a c
20 AQUINAS *Summa Theologica* PART I Q 81 16 d 167d Q 87 A 8 191d 192d
26 SHAKESPEARE *Henry V* ACT IV SC I [136-2 2] 553 -c [3 9-3 2] 554c d
32 MILTON *Paradise Lost* BK I [74-3 2] 141b-142a
37 FIELDING *Tom Jones* 20b d

51 TOLSTOY *War and Peace* BK XIV 606b 607a
52 DOSTOEVSKY *Brothers Karamazov* BK IV 83c 84a BK V 122b d BK VI 149d 150a 167b 169 BK XI 313c 314d

6c The temporal punishment of sin: divine scourges

OLD TESTAMENT *Genesis* 3:9-19; 4:8-15; 6:1-7:11-13; 18:20-19:29 / *Exodus* 7:12-14:22; 18:20,22-24; 32 / *Leviticus* 10:1-3; 18:24-30; 20; 24:10-23; 26 / *Numbers* 11; 14; 15:32-36; 16; 21:5-9; 25 / *Deuteronomy* 4:20-31; 11:16-17; 28:15-68; 29:16-29 / *Joshua* 5:6; 7—(D) *Josue* 5:6; 7 / *Judges* 10 / *I Samuel* 3:11-15; 5; 15; 28:3-2—(D) *I Kings* 3:11-15; 5; 15; 28:3-2 / *II Samuel* 6:6-8; 12; 21:1; 24—(D) *II Kings* 6:6-8; 12; 21:1; 24 / *I Kings* 8:31-53; 9:6-9; 11; 13; 14:7; 16:1-13; 21:18-24—(D) *III Kings* 8:31-53; 9:6-9; 11; 13; 14:7; 16; 16:1-13; 21:18-24 / *II Kings* ...23-24; 5:20-27; 9:1-10:11; 17:6-18; 22—(D) *IV Kings* 2:23-24; 5:20-27; 9:1-10:11; 17:6-18; 22 / *I Chronicles* 10:13-14; 21—(D) *I Paralipomenon* 10:13-14; 21 / *II Chronicles* 6:24-42; 12; 21:12-20; 26:16-21; 36—(D) *II Paralipomenon* 6:24-42; 12; 21:12-20; 26:16-21; 36 / *Job* passim, esp 4-5; 8; 11; 15:20-35; 18:1-21; 20; 22; 24:1-25; 27:13-23; 36:33 / *Psalms* 11:2-37; 39:10-11; 89:28-33; 94—(D) *Psalms* 10:20; 36; 38:11-12; 88:29-34; 93 / *Proverbs* 1:20-33; 2:10-22; 3:33-35; 5:3-14,21-23; 10:30 passim / *Ecclesiastes* 2:26; 8:11-13 / *Isaiah* passim, esp 1; 2:5-3:26; 5:1-30; 9:13-10:27; 13:1-... 28:1-32:20; 33:7-14; 34:1-17; 40:1-2; 42:13-25; 43:22-28; 47:1-15; 51:17-23; 63:1-6; 65:1-66:24—(D) *Isaias* passim, esp 1; 5:3-26; 5:1-30; 9:13-10:27; 13:1-14:23; 28:1-32:20; 33:7-14; 34:1-17; 40:1-2; 42:13-25; 43:22-28; 47:1-15; 51:17-23; 63:1-6; 65:1-66:24 / *Jeremiah* passim, esp 1:11-16; 4-9; 11; 13:9-14; 15; 16:1-21; 17:27; 19:13; 21:1-9; 32; 34:1-22; 44:1-30; 46:1-52:34—(D) *Jeremias* passim, esp 1:11-16; 4:1-9:26; 11:1-23; 13:9-14; 15:1-9; 16:1-21; 17:27; 19:13; 21:1-9; 32; 34:1-22; 44:1-30; 46-52:34 / *Lamentations* passim, esp 1:18-22; 3:42-45; 4 / *Ezekiel* 3:30 passim—(D) *Ezechiel* 3:39 passim / *Daniel* 4:5-17:30; 9:3 / *Hosea* passim—(D) *Osee* passim / *Joel* passim / *Amos* passim / *Obadiah*—(D) *Abdias* / *Jonah* 3—(D) *Jonas* 3 / *Micah* passim—(D) *Micheas* passim / *Nahum* passim / *Habakkuk* passim—(D) *Habacuc* passim / *Zephaniah* passim—(D) *Sophonias* passim / *Zechariah* 9:3-6; 1-9—(D) *Zacharias* 9:3-6; -9 / *Malachi* 2:4—(D) *Malachias* 2:4
APOCRYPHA *Tobit* 3:1-6—(D) OT *Tobias* 3:1-6 / *Judith* 5:7-18; 8:18-19; 9—(D) OT *Judith* 5:2; 8:8; 5:9; 11:9-19 / *Wisdom of Solomon* 6:2-24; 3:9-19; 5:7-69; 8; 19:10; 14:7; 31

(6 *Guilt and the punishment of sin 6c The temporal punishment of sin: divine scourges*)

15 18 16 19 17 18 10-19 2—(D) OT *Book of Wisdom* 1 7-8 12 16 2 24 3 9 19 5 17 6 9 10 1-8 11 9-20 1 14 7 31 15 18 16 19 17 18 10-19.20 / *Ecclesiasticus* 5 7 10 13-16 11 26 16 6-13 23 18 26 27 25 28 6 39 27-30—(D) OT *Ecclesiasticus* 5 2-7 10 13 16 11.28 16 6-13 23.25 36 27 25 28 6 39 32 36 / *Baruch* 1 5 passim—(D) OT *Baruch* 1 5 passim / *I Maccabees* 2 62 63 6 1 16—(D) OT *I Machabees* 2 62-63 6 1 16 / *II Maccabees* 6 12 17 7 31 38 9 10 4 12 40-42—(D) OT *II Machabees* 6 12 17 7 31 38 9 10 4 12 40 42

NEW TESTAMENT *Acts* 12 20 23 13 4 12 / *I Corinthians* 11 32 / *Revelation* 8-9 11 16-18 —(D) *Apocalypse* 8 9 11 16-18

5 AESCHYLUS *Persians* 15a 26d / *Seven Against Thebes* 27a 39a c / *Prometheus Bound* 40a 51d / *Agamemnon* 52a 69d / *Choephoroe* 70a 80d / *Eumenides* 81a 91d

5 SOPHOCLES *Oedipus the King* 99a 113a c / *Oedipus at Colonus* 114a 130a c / *Antigone* 131a 142d esp [58 626] 136b c / *Ajax* 143a 155a c

5 EURIPIDES *Electra* 327a 339a c / *Bacchantes* 340a 352 c / *Orestes* 394a 410d

6 HERODOTUS *History* BK I 4d BK II 70d 71a BK III 95c d 103b d BK IV 159d BK VI 199c d 201b c 201d 202c 203 b BK VII 217c 237d 239a 246b c 246d 247a BK VIII 279d 280a 283d

12 LUCRETIUS *Nature of Things* BK III [978-1023] 42d-43b BK VI [379-422] 85b d

14 PLUTARCH *Camillus* 107b d

18 AUGUSTINE *Confessions* BK III par 5 14b / *City of God* BK XIX CH 15 521a c BK XXI CH 13 14 571d 572c / *Christian Doctrine* BK II CH 23 648a c

20 AQUINAS *Summa Theologica* PART I II Q 79 A 3 4 158a 159c Q 87 A 4 188b d

21 DANTE *Divine Comedy* PURGATORY II [103 145] 57a c [85 129] 59d 60 XX [34-96] 83 84a XXII [85 111] 89a b XXXIII [34-78] 104c 105a PARADISE XVI [46-99] 132c 133a XVIII [115 136] 134d 135a XXI [121] XXII [18] 139c d XXVII [1-66] 147b 148a [121 48] 148c d

22 CHAUCER *Physician's Tale* [12,21 220] 370b 371a / *Pardoner's Tale* 374a 382b / *Monk's Tale* [14 149-684] 437a-447

23 HOBBES *Leviathan* PART II 160c 161a 163d 164a

30 BACON *New Atlantis* 204d 205b

32 MILTON *Paradise Lost* BK XII [101 120] 321b / *Samson Agonistes* [667 9] 354 355a [1156-1177] 364b 365a [1669-170] 376a b

33 PASCAL *Provincial Letters* 139a 140a

35 LOCKE *Toleration* 1a 2c 5c 6a 14 15a

36 STERNE *Tristram Shandy* 282a 287b

37 FIELDING *Tom Jones* 20b 21a

38 MONTESQUIEU *Spirit of Laws* BK XII 85d 86a

40 GIBBON *Decline and Fall* 180b 188b c 198d 200a 302d 303c 452b d

41 GIBBON *Decline and Fall* 93c 94c passim

44 BOSWELL *Johnson* 314c 315b

48 MELVILLE *Moby Dick* 30a 36b

51 TOLSTOY *War and Peace* BK XIV 606b 607a

52 DOSTOEVSKY *Brothers Karamazov* BK II 30b 32a

6d The eternal punishment of sin the everlasting perdition of the unrepentant in Hell

OLD TESTAMENT *Psalms* 9 16 17—(D) *Psalms* 9 17 18 / *Proverbs* 7 6 27 11 31 / *Isaiah* 33 10 14 66.24—(D) *Isaias* 33 10-14 66.24 / *Daniel* 12 2

APOCRYPHA *Judith* 16 17—(D) OT *Judith* 16 20 21 / *Wisdom of Solomon* 4 16-20 5 1 14—(D) OT *Book of Wisdom* 4 16-20 5 1 15 / *Ecclesiasticus* 7 16-17 12 6 18 22 24 21 9-10—(D) OT *Ecclesiasticus* 7 17 19 12 4 18 22 24 21 10-11

NEW TESTAMENT *Matthew* 3 7 12 5 22,29-30 8 12 10 14 15 28 11 20-24 13 41 42 49-50 18 7-9 25 31 46 esp 5 41 25 46 / *Mark* 3 29 9 42 49 16 16 / *Luke* 12 5 16 19-26 / *John* 15 6 / *Romans* 6 23 7 5 / *I Corinthians* 6 8 / *II Thessalonians* 1 7 9 / *Hebrews* 10 26-31 / *James* 5 1-6 / *I Peter* 4 18 / *Jude* 6-13 / *Revelation* 2 20 23 14 9-11 19 17 20 15 21 8—(D) *Apocalypse* 2 20-23 14 9-11 19 17 20 15 21 8

4 HOMER *Odyssey* BK XI [568 600] 248d 249a

5 ARISTOPHANES *Frogs* [143 153] 565d 566a

12 LUCRETIUS *Nature of Things* BK III [978-1023] 42d 43b

18 AUGUSTINE *City of God* BK XIII CH 2 360b-361a CH 12 365d 366a CH 14 15 366b d CH 23 372b d BK XIV CH 1 376b d 377a CH 15 388d 390a BK XV CH 1 397b d 398c BK XX CH 13 519a 520a CH 28 529d 530a c BK XX CH 15 543d 544b BK XXI 560 586a c esp CH 1 3 560a 56 a CH 9-10 568d 570b CH 13 571c 572 CH 17 574a b CH 23 576c 577b

19 AQUINAS *Summa Theologica* PART I Q 10 A 3 REP 2 42c-43b Q 21 A 4 REP 1 126c 127 Q 63 A 8 ANS 332c 333b

20 AQUINAS *Summa Theologica* PART I II Q 8 AA 3 5 187b 189 PART III SUPPL, Q 70 A 3 897d 900d Q 87 A 1 REP 4 997b 998c Q 97-99 1066a 1085a c

21 DANTE *Divine Comedy* HELL 1a 52d esp III 4a 5b V [1 51] 7a c VI [94 115] 9b c VIII [60-130] 10c d XI 15a 16b XIV [16-72] 19c 20b XXVII [55 136] 40 -41b XX III [112 142] 42c 43 XXXIII [91 150] 50 51a PARADISE XV [10-12] 128c

22 CHAUCER *Friar's Tale* 278a 284a / *Summoner's Tale* [14 005-020] 434a b / *Parson's Tale* par 8

497b-498a par 10 498b 502a par 15 506a b par 75 536a par 99 548b par 01 549a
23 HOBBES *Leviathan* PART III 193d 195d PART IV 250c 251b 253b 255b
24 R BELAIS *Gargantua and Pantagruel* BK II 119b-122a
26 SHAKESPEARE *Richard III* ACT I SC IV [42-63] 115a b
27 SHAK S EARE *Macbeth* ACT II SC III [1 23] 292b
31 DES ARTES *M ditations* 69b
32 MILTON *Paradis L st* BK I [1]-BK II [628] 93b 125a esp BK II [85-92] 113a BK IV [1 113] 152b-155a
33 PASCAL *Provincial Letters* 82a
35 LOCKE *Human Understand ng* BK II CH XXI S CT 62 194c d S CT 72 198a c CH XXVIII SECT 8 230a
40 G BBON *D cline and Fall* 188d 189a
41 GIBBON *Decl ne and Fall* 149c 150c 234a b
44 BOSWELL *Jol on* 363 b
48 MELVILL *Moby Dick* 3b-4a
52 DOSTO VSKY *B others Karamazov* BK I 10b-11a BK VI 169c 170b BK XI 337a 346a passim

6e The purify ng punishments of Purgatory

OL TESTAM NT *I iah* 4 4—(D) *Isaias* 4 4 / *Zecha iah* 13 8-9 -(D) *Zacharias* 13 8-9 / *M lachi* 3 1-6—(D) *Mala hias* 3 1-6
A OCRYPHA *II Maccabees* 12 43 46—(D) OT *II M chab es* 2 43-46
NEW TE TAMENT *Matthew* 3 1 1 12 32 / *Luke* 3 6-17 / *I Corinthians* 3 10-15
13 V RG *Aeneid* BK VI [724 751] 230b 231a
18 AUGUSTINE *City of God* BK XX CH 25 26 554c 556b K XX CH 3 571 572a
20 AQU NAS *Summa Theologica* PART III SU PL, Q 69 A ANS and R P 886c 887d A 7 ANS and R 6 891d 893
21 D NTE *Divine Comedy* PURGATORY 53a 105d esp II 53a 55d III [103 145] 57a-c V [85-129] 59d 60c X 65d 67b X [97]-XI [90] 68b-69c XIII 71d 73 XV I [76-139] 79b d XVIII [76- 45] 80d 81b XXI [34-75] 85b d XXV [109]-XXVI [90] 92c 93d XXX XXXI 99b 102b
23 H B E *Leviath n* PART III 244b-c PART IV 250 251 255b 258b
27 SHAKESP AR *Hamlet* ACT I SC V [9- 2] 37a
41 GIB ON *De l ne and Fall* 234b 520b-c
44 B SW LL *Joh n* 173d
52 D OEVSKY *B others Karama v* BK X 341d 342

7 Gr c and good work n l tion to salvation from s n

OLD TESTAMENT *E du* 34 7-9 / *N mbers* 14 18-2 / *I K gs* 8 33-39 46-50—(D) *III K gs* 8 33 39 46-50 / *II Chro les* 6:20-30 36-39 7 4—(D) *II P l p menon* 6:20-30 36-39 7 14 / *P lms* 32 1-5 5 78 38 85 2 86 5 99 8 03 1 13 130—(D) *Psalms* 3 1 5 50 77 38 84 3 85 5 98 8 102 1 13 129 / *Isaiah* 44 22 55 7—(D) *Isaias* 44 22 55 7 / *Jeremiah* 3 12 31 34 33 8 36 3 50:20 —(D) *Jeremias* 3 12 31 34 33 8 36 3 50 20 / *Daniel* 9 9 / *Hosea* 14 1-7—(D) *Osee* 14 - 8 / *Micah* 7 18- 0—(D) *Micheas* 7 18 20
APOCRYPHA *Wisdom of Solomon* 11 23 12 19—(D) OT *Book of Wisdom* 11 4 12 19 / *Eccle asticus* 2 11 16 11 14 18 11 14 28 2-5 —(D) OT *Ecclesiasticus* 2 13 16 11 15 18 9-14 28 2-5
NEW TESTAMENT *Matthew* 5 7 6 12 14-15 9 2-6 12 31 3 18 21 35 / *Mark* 2 5 0 3 28 4 1 11 25 26 / *Luke* 1 77-78 5 0-24 6 36-37 7 37-50 11 4 12 10 18 9 14 23 34 / *J hn* 3 16-17 / *Acts* 5 31 15 1 11 esp 15 11 26 18 / *Romans* 3-8 9 15-18 9 30-10 1 11 5 3 / *II C rinthians* 5 5-6 2 / *Galatians* 2 6 1 3 13-14 / *Ephesians* 1 10 2 4-9 4 32 / *Ph l ppians* 2 1 13 / *Coloss a s* 1 3-14 2 13 3 13 / *II Timothy* 1 8 10 / *Titus* 2 11 14 3 3-8 / *Hebrews* 4 16 8 1 10 / *James* 1:22 27 2 14-26 5 15 20 / *I Peter* 1 3 13 2 10 4 8 / *II Peter* 1 3-11 / *I John* 1 9 2 12 3 1-10
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20 AQUINA *Summa Theologica* PART I I Q 63 A R P 2 64b 65a Q 109 AA 7-10 344a 347d Q 11 A 2 352d 353d
21 DANTE *D ine C medy* H LL I II 1a-4a IV [13-60] 5c 6a VIII [65] IX [1 3] 11c 13b XXIV [1-60] 34d 35b PUR ATORY 53 105d P I 53a 54 IV [25-5] 57d 58a [85-96] 58b c V [37-60] 62d 63a VIII [1 8] 64a 65b X 65d 67b X [1 36] 68d 69a XXX [85 45] 100b d PARADISE XXVIII [94 114] 149d 150a XXXII [37 84] 155a c
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37 FIELDING *Tom Jones* 38d
41 GIBBON *Decline and Fall* 233d 234b 334b c
44 BOSWELL *Johnson* 295b
46 HEGEL *Philosophy of History* PART IV 332d 333a 349c d 354a c 36?a
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Treatments of the sense of sin in relation to duty honor conscience and abnormal feelings of guilt *see* DUTY 4-4b HONOR 2a PUNISHMENT 5c 6

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I Works by authors represented in this collection
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For the date place and other facts concerning the publication of the works cited consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*

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Chapter 87 SLAVERY

INTRODUCTION

MORALISTS and political philosophers who appear to be in substantial agreement on the principles of justice differ remarkably from one another on whether slavery is just The sharpness of this disagreement is made all the more remarkable by the almost unanimous condemnation of slavery—in two senses of that term.

As appears in the chapter on TYRANNY the condition of those who live under tyrannical rule is generally conceived as a kind of slavery involving not only the loss of political freedom but also the suffering of other abuses or injuries With the possible exception of Hobbes who says that tyranny is merely monarchy *misliked* none of the great authors from Plato and Aristotle to Rousseau Hegel and Mill writes of tyranny except as a perversion of government—unjust lawless or illegitimate The evil of tyranny for them lies *in the enslavement* of men who deserve to be free who should govern themselves or at least should be governed for their own good not exploited by a ruler who uses them for his own private interests

Some writers like Montesquieu who tend to identify despotism and tyranny see little difference between subjection and slavery regarding both alike as degradations Yet Montesquieu—and with him Aristotle—also thinks that for certain races of mankind subjection or slavery may be justified Mill later makes the comparable point that for a people at a certain stage of political development subjection may be necessary for a time in preparation for citizenship The two basic distinctions in political status which are here implied —between slavery and subjection and between subjection and citizenship—are developed more fully in the chapter on CITIZEN The first of these distinctions relates to the difference in the condition of men under tyranny and under benevolent despotism the second to the difference in the condition of men under absolute and under constitutional government

The other sense in which the word slavery seems always to be used with the connotation of evil is the sense in which Augustine speaks of man s slavery to lust as a consequence of original sin or in which Spinoza writes of human bondage—the condition of men enslaved by the tyranny of their passions—as compared with human freedom under the rule of reason This meaning of slavery is discussed in other chapters such as EMOTION and LIBERTY

The slavery which results from the tyranny of the passions is a disorder from which any man may suffer it stems from a weakness in the human nature which is common to all *Similarly the slavery of a whole* people under tyrannical rule is a perversion of government for all the members of the community not just for some But whenever slavery is defended it is justified only for *some men* within a community not for all or if for a whole people not for all mankind but only for *certain peoples* under certain conditions With regard to slavery the basic issue of justice is, therefore whether *some* men should be slaves or *all* should be free not whether *all* should be slaves or *all* free

THE DISTINCTION BETWEEN the slavery of some men within a community and the enslavement of a whole people appears to be related to the distinction between economic and political enslavement *In the ancient meaning* of the word economic the economic slave is the slave of the household or family A complete household writes Aristotle consists of slaves and freemen The elements of a family are

master and slave husband and wife father and children

That the distinction between slave and free man signifies economic rather than political status for Aristotle and for the ancients generally seems to be indicated by the fact that under certain types of oligarchical constitution free men are excluded from citizenship without thereby becoming slaves But in all ancient republics democratic as well as oligarchical slaves are ineligible for citizenship

Though the relation of master and slave is essentially economic rather than political such slavery has a political aspect in the sense that some men have no function in the state except to serve other men. Aristotle speaks of them as necessary to the state but not as are citizens parts of it. 'The necessary people he says are either slaves who minister to the wants of individuals or mechanics and laborers who are the servants of the community

The mark of economic slavery seems to be the kind of work a man does and the conditions under which he labors whereas political slavery seems to depend upon the kind of life a man leads and the conditions under which he lives in society The economic slave serves a master by his work The political slave lives under a tyrant In Aristotle s view it is only the man who is economically free who has anything to lose from being enslaved by a tyrant No free man if he can escape from it will endure such government he writes but the barbarians who are by nature slaves do not rebel against tyranny Where some men are by nature free there is also a natural distinction between women and slaves but among barbarians according to Aristotle no distinction is made between women and slaves because there is no natural ruler among them they are a community of slaves male and f male

The difference between economic bondage—which can include what Marx calls the wage slavery of the proleta iat as well s chattel slavery and other forms of serfdom—and the political condit on of those enslaved by a tyrant does not seem to affect the issue of just ce Those like Hobbe and Locke who think that the vanqu shed n ar must pay for be ng allowed to live by subm tting to slavery do not seem concerned whether the servitude takes the form of private possession by an individual master or the subjugation of a whole people by the conquering state Nor do those like Aristotle and Montesquieu who regard some men or some races as naturally servile seem to offer reasons for political slavery different from those which they think justify economic servitude

What does seem to affect the issue concerning the justice of slavery is the difference between the natural slave and the slave by force or law This is the difference between the man who is born a slave (not merely born of slaves and into slavery) and the man who born with a nature fit for freedom is made a slave either because his parents before him were slaves because he is sold into slavery or because for one reason or another he forfeits his birthright to freedom

If no men are by nature slaves then the only questions of justice concern the conditions which justify making slaves of free men These may remain the only questions even if there are natural slaves since it cannot be unjust to treat as slaves those who are by nature slaves any more than it is unjust to treat animals as brutes

In both cases some consideration may be given to how slaves or animals should be treated 'The right treatment of slaves Plato declares in the *Laws* is to behave properly to them and to do to them if possible even more justice than to those who are our equals Justice also requires according to Plato that if a slave or an animal do any harm the master shall pay for the injury

WE HAVE ALREADY observed that with regard to natural sl very the main issue i one of f ct The fact n question concerns human equality and in qual ty W thin that equality of all men whi h rests upon their common possession of human nature are some men by nature inferior to others in the r use of reason or their capacity for leading the life of reason? Does such inferiority prevent them from d recting their own lives or even their own work to the ends which are the natural fulfillment of man s powers? And if so do not such men p ofit from being d rect d by their super ors as well as from serving them and through serving them,

participating in the greater good their betters are able to achieve?

These are the questions of fact which Aristotle seems to answer affirmatively as he develops his theory of natural slavery If the facts are granted then no issue of justice arises for Aristotle can say that the slave by nature and the master by nature have in reality the same interests It is by the justice inherent in the relation of master and slave *when both are naturally so related* that Aristotle can criticize the injustice of all *conventional* forms of slavery But the question of fact must be faced as Aristotle himself is aware

Is there any one intended by nature to be a slave he asks and for whom such a condition is expedient and right or is all slavery a violation of nature? Aristotle recognizes that others affirm the rule of a master over slaves to be contrary to nature and that the distinction between slave and free man exists by law only and not by nature and being an interference with nature is therefore unjust He himself questions the justice of making slaves of captives taken in war for that may violate the natures of men of high rank who have had the misfortune to be captured or sold But he thinks that the same kind of difference which exists between male and female—the male being by nature superior the female inferior the one ruling the other submitting to rule—can be extended to all mankind

Where there is such a difference Aristotle explains as that between soul and body or between men and animals the lower sort are by nature slaves and it is better for them as for all inferiors that they should be under the rule of a master For he who can be and therefore is, another s and he who participates in a rational principle enough to apprehend but not to have such a principle is a slave by nature whereas the lower animals cannot even apprehend a principle they obey their instincts. And indeed the use made of slaves and of tame animals is not very different for both with their bodies minister to the needs of life If men differed from one another in the mere forms of their bodies as much as the statues of the gods do from men all would acknowledge that the inferior class should be slaves of the superior And if this is true of the body how much more just that a similar distinction should exist in the soul It is clear then that some are by nature free and others slaves and that for these latter slavery is both expedient and right

According to the theory of natural slavery it is as good for the slave to have a master as for the master to have a slave This reciprocity of interest does not occur in legal or conventional slavery In both types of slavery the slave is a piece of property a possession Whether by nature or by institution a slave does not own himself he is another s man He may be called another s man Aristotle says who being a human being is also a possession Does this mean that the slave belongs wholly to the master in all that he is and has? He would seem to belong to his master insofar as he is a *possession* but not wholly—in all that he is and has—insofar as he is a *human being* Aristotle does not introduce such a qualification where he says that the slave is a part of the master a living but separated part of his bodily frame yet he adds where the relation of master and slave is natural they are friends and have a comon interest but where it rests merely on law and force the reverse is true"

Aristotle considers the difference between the natural slave and other forms of personal property whether domestic animals beasts of burden or the inanimate instruments used in the household for productive purposes Do slaves he asks have any excellence beyond and higher than merely instrumental and ministerial qualities of the sort to be found in tools and animals? Do they have virtues and if so then in what way will they differ from freemen?

Aristotle answers by saying that since they are men and share in the rational principle it seems absurd to say that they have no virtue But since the rational principle in them is weak and consists only in the ability to execute decisions—not to make them or to know the end for which they are made—the slave will have a capacity for only so much virtue as he requires enough virtue for example to prevent him from failing in his duty through cowardice or lack of self control

It is precisely because of his limited competence and virtue that the slave needs, and

profits by having a master Aristotle thinks that he is better off than the artisan out of bondage The slave shares in his master s life the artisan is less closely conn cted with him and only attains excellence in proportion as he becomes a slave The meaner sort of mechanic has a special and separate slavery and whereas the slave exists by nature not so the shoemaker or other artisan

The separate slavery of the artisan makes him more like an animal or an inanimate tool in the way he is used for according to Aristotle he is an instrument of production while the natural slave participates in his master s life by being an instrument not of production but of action The work the slave does enables the master to live well—to achieve the happiness of the political or contemplative life—and since life is action not production the slave is a minister of act on If the slave had in his own nature the capacity for human happiness he would not be by nature a slave nor be limited to the good of serving another man s happiness

Slaves and brute animals cannot form a state Aristotle says because the state exists for the sake not of life but the good life and slaves have no share in happiness or in a life of free choice No one ass gns to a slave a share in happiness he says in another place unless he assigns to him also a share in human life At best that share could come only from being a part of the master and contributing to the master s happiness But though to this ex tent the slave by nature and the master by nature have in reality the same interests the rule under which the slave lives is neverthe less exercised primarily with a view to the inter est of the master

ARISTOTLE S DOCTRINE OF natural slav ry is re jected by those who affirm the fundamental equality of all men in the r common humanity and who in addition ins st that th r inequ lity as individuals in talent or capac ty should not affect their status or determine their treatment On these grounds Roman Sto cs and Christian theologians seem to agree—and with them such modern th nkers as Rousseau Kant Hegel and Mill—that all men are by nature born to be free Freedom writes Kant belongs to every man in virtue of his Human ty There s in deed an innate Equality belonging to every man which consists in his right to be independ ent of being bound to others in virtue of which he ought to be *his own master by Right* That all persons are deemed to have a *right* to equality of treatment seems to follow for Mill from the principle that one person s happiness supposed equal in degree (with the proper al lowance made for kind) is counted for exactly as much as another s The equal claim of everybody to happiness involves an equal claim to all the means of happiness among th m freedom

But though theologians like Augustine and Aquinas deny that slavery is instituted by nature they do not seem to regard it as con trary to natural law or to the will of God Something can be according to natural law in two ways Aquinas says First because nature inclines thereto Secondly because nature does not require the contrary Just as we can say in the second sense that nakedness is natural for man because nature did not give him clothes, but art invented them so we can say that all men are by nature free because slavery was not instituted by nature but de vised by human reason for the benefit of human life

The institution of slavery whereby one man belongs to another for his use seems due to the fallen nature of man as one of the penal conse- quences of original sin If man had remained in a state of innocence one man would have ruled another for the latter s good but no man would have been the master of slaves to be used for the master s good Since it is a grievous matter to anyone to y eld to another what ought to be one s own it follows says Aquinas that such dominion necessarily mplies a pain inflicted on the subj ct This painfulnes of slavery in turn seems to imply a contradiction to Aristotle s view that slavery fits cert in natures and is for their benefit

By nature as God first created us writes Augustine no one is the slave either of man or of sin Both sorts of slavery are introduced by sin and not by nature Both ar punish ments for sin though on seem to Augu t ne mo e grievous than the other It is a happier th ng he says to be the slave of a man than of a lust for even this very lust of ruling

lays waste men s hearts with the most ruthless dominion Moreover when men are subjected to one another in a peaceful order the lowly position does as much good to the servant as the proud position does harm to the master

Not sin but climate according to Montesquieu is the cause of slavery and to some extent its excuse Though he thinks that the state of slavery is in its own nature bad neither useful to the master nor to the slave Montesquieu like Hippocrates before him regards the Asiatics as reduced to servility by the physical conditions of their life There reigns in Asia he writes a servile spirit which they have never been able to shake off Under Asiatic despotism where whole peoples live in political servitude domestic slavery is more tolerable than elsewhere In those countries where the excess of heat enervates the body and renders men so slothful that nothing but the fear of chastisement can oblige them to perform any laborious duty slavery is more reconcilable to reason

Montesquieu seems to accept Aristotle s doctrine with some qualifications Aristotle endeavors to prove that there are natural slaves but what he says is far from proving it If there be any such I believe they are those of whom I have been speaking Slavery is both natural and unnatural As all men are born equal Montesquieu declares slavery must be accounted unnatural though in some countries it be founded on natural reason Natural slavery then is to be limited to some particular parts of the world But in arguing the right of Europeans to make slaves of the negroes he concludes with the equivocal remark that it is impossible for us to suppose these creatures to be men because allowing them to be men a suspicion would follow that we ourselves are not Christians

Hegel s comment on the enslavement of African negroes by Europeans runs somewhat differently Bad as this may be he writes their lot in their own land is even worse since there a slavery quite as absolute exists But though Hegel thinks that the negroes are naturally given to slavery he regards the natural condition itself as one of absolute and thorough injustice To remove this injustice however is not easy Man must be matured for freedom Hegel writes The gradual abolition of slavery is therefore wiser and more equitable than its sudden removal

Mill also looks upon slavery as a stage in the rise of certain peoples from savagery to political life and maintains that the transition to freedom must be gradually effected A slave properly so called he says is a being who has not learnt to help himself He is no doubt one step in advance of a savage He has not the first lesson of political life still to acquire He has learnt to obey But what he obeys is only a direct command It is the characteristic of *born* slaves to be incapable of conforming their conduct to a rule or a law They have to be taught self government and this in its initial stage means the capacity to act on general instructions Extenuations of the injustice of ruling men as slaves such as those proposed by Hegel and Mill are rejected by Rousseau

The notion that some men are by nature slaves whether in Asia or in Europe seems to Rousseau to be an illusion due to the fact that those who are made slaves by force have had their natures debased to slavishness Aristotle he says took the effect for the cause Nothing can be more certain than that every man born in slavery is born for slavery Slaves lose everything in their chains even the desire of escaping from them If then there are slaves by nature it is because there have been slaves against nature Force made the first slaves, and their cowardice perpetuated the condition

It is sophistry he thinks for philosophers to attribute to man a natural propensity to servitude because the slaves within their observation are seen to bear the yoke with patience they fail to reflect that it is with liberty as with innocence and virtue the value is known only to those who possess them and the taste for them is forfeited when they are forfeited themselves

The issue concerning slavery as a social or legal institution does not seem to be resolved by the views men take of natural slavery Aristotle who holds that *only* natural slavery is justified criticizes those who affirm to be unjust and inexpedient in their own case what they are not ashamed of practising towards others they demand just rule for themselves,

he writes but where other men are concerned they care nothing about it Such behavior is irrational unless the one party is and other is not born to serve This cannot be determined by conquest Aristotle questions therefore the convention by which whatever is taken in war is supposed to belong to the victors or the principle that because one man has the power of doing violence and is superior in brute strength another shall be his slave and subject Those who assume that slavery in accordance with the custom of war is justified by law are confronted by Aristotle with the question What if the cause of the war be unjust?

Hobbes and Locke appear to take an opposite view Men in a state of nature are free though they can actually enjoy only as much freedom as they have power to secure Yet the natural inequality in their powers does not establish a natural right on the part of the stronger to en slave the weaker Hobbes makes the right of mastership or what he calls despotical domin ion depend not merely upon victory in war but upon a covenant into which the vanquished enter voluntarily when the vanquished to avoid the present stroke of death covenanteth that so long as his life and the liberty of his body is allowed him the victor shall have the use thereof at his pleasure Only after such covenant is made the vanquished is a serv ant and not before It is not therefore the victory that giveth the right of dominion over the vanquished but his own covenant That Hobbes means chattel slave when he says serv ant seems to be ind cated by his remark that the master of the servant is master also of all he hath and may exact the use thereof that is to say of his goods of h s labour of his servants and of his children as often as he shall think fit

Locke disagrees with Hobbes that one man can give another the right to enslave him by contracting to become a slave in order to avoid death A man not having the power of his own life he writes cannot by compact or his own consent enslave himself to anyone No body can give more power than he has himself and he that cannot tak away his o vn life can not give another power over it As among the ancient Jews men can sell themselves into temporary service to requ te a debt But th s was a kind of drudgery not slavery the per son sold was not under an absolute arbitrary despotical power for the master could not have the power to kill him at any time whom at a certain time he was obliged to let go free out of his service No Jew Aquinas concurs could own a Jew as a slave absolutely but only in a restricted sense as a hireling for a time And in this way the Law permitted that through stress of poverty a man might sell his son or daughter

Absolute slavery for Locke is nothing else but the state of war continued between a law ful conqueror and a captive It is lawful he thinks to kill a violent aggressor for to that hazard does he justly expose himself whoever introduces a state of war and is aggressor in it But he who has forfeited his life necessarily for feits his freedom Slaves then are those who being captives taken in a just war are by right of nature subjected to the absolute dominion and arbitrary po ver of their masters In contrast to the limited servitude which a man can contract for wages absolute slavery is the effect only of forfeiture which the aggressor makes of his own life when he puts himself into the state of war with another

Against Locke and Hobbes as well as Aris totle Rousseau denies that there is any justice in slavery—by nature by covenant or com pact or by right of war To think as Hobbes appears to that the ch ld of a slave comes into the world as a slave is in Rousseau s opinion to say that a man shall come into the world not a man Holding that slavery is contrary to nature Rousseau also holds that it cannot be authorized by any right or law A man can not alienate his freedom by selling himself into slavery for to renounce liberty is to renounce be ng a man

In Kant s language a contract by which the one party r nounces his *whole* freedom for the adv ntage of the other ceasing ther by to be a person and consequently having no duty even to observe a contract is self contradictory and is therefore of itself null and void Agreeing that such a contract is a nullity Hegel holds that the slave has an absolute right to f himself but he adds that if a man is a lave his own will is responsible for his sl very Hence the wrong of slavery lies at the door not simply of enslave s or conquerors but of the slaves and the conque ed themselves

As for Grotius and the others who find in war another origin for the so called right of slavery —on the ground that the victor having the right of killing the vanquished the latter can buy back his life at the price of his liberty —Rousseau thinks their argument begs the question The right of conquest he says has no foundation other than the right of the strongest If war does not give the conqueror the right to massacre the conquered peoples the right to enslave them cannot be based upon a right which does not exist

Since Rousseau denies that victory gives the victors a right to kill those who have laid down their arms he regards it unfair to make the captive buy at the price of his liberty his life over which the victor holds no right From whatever aspect we regard the question he concludes the right of slavery is null and void not only as being illegitimate but also because it is absurd and meaningless The words *slave* and *right* contradict each other and are mutually exclusive

In modern as well as ancient times in the European colonies in the New World if not in Europe itself slave labor characterizes a certain type of economy and determines the mode of production especially in agriculture and mining The slave as chattel is bought and sold like other property He may be a source of profit to his owner in exchange as well as in production The traffic in slaves depends upon an original acquisition either through the spoils of war or by the activity of slave traders who hunt men as if they were animals to transport them in chains and sell them into slavery

In the ancient world individual slave owners emancipated their slaves even as under modern feudalism a great landowner like Prince Andrew in *War and Peace* freed his serfs Aristotle speaks of those in his own time who opposed the institution of slavery and the Roman Stoics did a great deal to ameliorate the condition of the slave and to protect him legally against abuse But there seems to have been no political party or active political movement among the ancients corresponding to the abolitionists and their struggle in the 18th and 19th centuries Even then however the abolitionists were looked upon as a radical minority who had no respect for the rights of property in their over zealous sentimentality about the rights of men Those who were willing to outlaw the African slave trade as outrageous were less outraged by the treatment of men as chattel once they were possessed

Madison for example referring to the prohibition affecting the importation of slaves into the United States which the Constitution postponed until 1808 thinks it a great point gained in favor of humanity that a period of twenty years may terminate forever within these States a traffic which has so long and so loudly upbraided the barbarism of modern policy But in another paper the writers of *The Federalist* present their version of the Southern argument defending the Constitution s apportionment of representation determined by adding to the whole number of free persons including those bound to service for a term of years and excluding Indians not taxed three fifths of all other persons They do not object to the view of the negro slave as two-fifths property and three fifths a person confessing themselves reconciled to reasoning which though it may appear a little strained in some points appeals to a principle they themselves approve namely that government is instituted no less for the protection of property than of persons

There are even those in the 18th century who defend the slave trade Boswell reports an argument set forth by Dr Johnson in favor of granting liberty to a negro who claimed his freedom before a Scottish Court of Session The sum of Dr Johnson s argument according to Boswell came to this No man is by nature the property of another the defendant is therefore by nature free The rights of nature must be in some way forfeited before they can be justly taken away and if no proof of such forfeiture can be given we doubt not but the justice of the court will declare him free Admitting that Johnson may have been right in the particular case at hand Boswell protests his general attitude toward slavery and the slave trade

To abolish a status Boswell writes which in all ages God has sanctioned and man has continued would not only be robbery to an innumerable class of our fellow-subjects but it

would be extreme cruelty to the African sav ages a portion of whom it saves from massacre or intolerable bondage in their own country and introduces into a much happier state of life especially now when their passage to the West Ind es and their treatment there is hu m nely r gulated

Issues of justi e a ide economists like Smith and Marx question the productivity of slave la bor Improvements in machinery are least of all to be expected writes Smith when the *proprietors employ slaves for their workmen* The experience of all ages and nations I be lieve demonstrates that the work done by slaves though it appears to cost only their maintenance is in the end the dearest of any A person who can acquire no property can have no interest but to eat as much and to labor as little as possible He explains the lack of me chanical progress in Greece and Rome by the fact that slaves are very seldom inventive and all the most important improvements in machinery or in the arrangement and distri bution of work which facilitate and abridge labor have been the discoveries of free men

Marx also judges production by slave labor to be a costly process The principle uni versally applied in this method of production is to employ the rudest and heaviest imple ments and such as are difficult to damage owing to their sheer clumsiness In the slave states bordering on the Gulf of Mexico down to the date of the civil war ploughs constructed on old Chinese models which turned up the soil like a ho or a mole instead of making furrows were alone to be found

But Marx does not limit his judgment of slav ery to criteria of efficiency nor does he limit his consideration of servitude to its more obvi ous forms of chattel slavery and feudal serfdom For him all use of labor by those who own the instruments of production involves exploita tion it differs only in the degree to which the owner derives a surplus value from the labor power he possesses through property rights or wage payments

According to Marx the essential difference between the various economic forms of soc ety between for inst nce a society based on slave labor and one based on wage labor l s only in the mode in which this surplus labor is in each cas extracted from the actual producer the la borer As all the value produced by a slave in excess of the cost of keeping him alive profits his owner so during the period of surplus labor the usufruct of the labor power creates a value for the capitalist that costs him no equiv alent In this sense it is that surplus labor can be called unpaid labor —whether it is the labor of chattel or wage slaves

Because a laborer is forced to sell his labor power *in the open market in order to subsist* Marx regards his so-called freedom as a pious fiction The contract by which he sold to the capitalist his labor power proved in black and white Marx writes that he disposed of him self freely The bargain concluded it is discov ered that he was no free agent that the time for which he is free to sell his labor po er is the time for which he is forced to sell it

Others take the view that there is a funda mental moral difference between chattel slaves and men who work for wages Hobbes for ex ample thinks that between slaves who are bought and sold as beasts and servants to whose service the masters have no further right than is contained in the covenants made be twixt them there is only this much in com mon— that their labor is appointed them by another In slightly varying terms Aquinas Locke and Kant make a similar distinction be tween the free servant or paid worker and the slave The point is summarized by Hegel as a difference between alienating to someone else products of my particular physical and mental skill and alienating the whole of my time as crystallized in my work In the latter case I would be making into another s property the substance of my being

D bat ng with Douglas Lincoln ins sted that pol tical freedom was th d ffe ence be tween the wh te slaves of the North and the bl ck slaves of the South The legal right won by the proletariat to organize and strike seems to be a difference which Marx himself recog n zes between the wage earner and the bonded slave Until his cha ns are struck the slave is not in the position of the free wo k gm n to fight for political ghts and privileges Citizen ship is not al ays e tended to the laboring classes but it is never conferred upon slaves

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred t For example in **4** HOMER *Il d* BK II [265 283] **12d** the number **4** is the number of the volume n the set the number **12d** indicates that the p sage is in section d of pa e 12

PAGE SECTIONS When the te t is printed in one column the letters **a** and **b** refer to the upp r and lo er halves of the p ge For example in **53** JAMES *Psych l gy* **116a 119b** the passage begins in the upper half of page 116 and ends in the lower half of pa e 119 When the text is printed in two olumns the letters **a** and **b** refer to the upper and lower halves of th left hand side of the page the letters and **d** to the upper and lower halves of the r ght hand side of the pa e For example in **7** PLATO *Symp sium* **163b 164c** the passage b gins in the lower half of the left hand side of pa e 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVIS ONS One or more of the main divisi ns of a work (such as PART BK CH SECT) are metimes included in the reference line numbers in brackets are given in cer tain cases *e g Iliad* K II [265–283] **12d**

BIB E REFERENCES The ref rences are to book chapter and verse When the King James and Douay versions differ in title of books or in the number ng of chapters o verse the King J mes versi n is c ted fir t and the Douay indicated by a (*D*) follows *e g* OLD TESTA MENT *Nehem ah* 7 45—(*D*) *II Esd as* 7 46

SYM OLS Th abb eviation esp calls the reader s atte tion to one or more especially rele ant parts of a whole reference passim s nifies that the topic is discussed inte mit tently rather than c ntinuously in the work or passage cited

Fo add tio l inf rmati n concerning the sty l of the eferen es see the Explanat on of Reference Style for g neral gu dance in the u e of *Th Great Ideas* consult the Preface

1 The nature of nsl vement the relation of maste and lave

OLD TESTAMENT *Genes s* 9 25

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N W TESTAMENT *Ephes n* 6 5-9 / *C los s* 3 2 4 1 / *I Tim thy* 6 1 3 / *Titu* 2 9-10 / *Ph lemon* / *I P ter* 2 18-25

4 HO I R *Odys ey* K [421 444] **187c d** BK XIV **260a 265d** BK XV [351 49] **269 271a** BK XVIII [3 3 345] **287b-d** BK XX [390-477] **309d 310d**

5 A S HYLUS *Agamemnon* [035 46] **63 b**

5 SO HOC E *Ajax* [2 6– 263] **153 154a** / *T a h n e* [46-29] **172b-c**

5 EUR P D S *Helen* [7 738] **305a** [6 – 64] **313b d** / *Iph gen t Aul* [3 3 3 6] **427b**

5 AR STO HAN *Plut s* [1–8] **629a**

6 HERODOTUS *Hist ry* BK **21b** BK IV **124 d** K V I **223 d**

7 PLATO *Lys* **16 18a** / *G gi* **271** / *The etetus* **528 d** / *St t m n* **597a b** / *Laws* BK V **709 710** K XI **772a 773**

8 AR S OTLE *Met phys s* BK I CH [98 b 5 7] **501a**

9 ARI TOTL *Eth* BK VI C II [61 30–b10] **413c d** K X H 6 [77a6– 0] **431c** / *Polit s* BK I CH 2 [1 52a24–b 2] **445b d** CH 3 , **446d 449** CH 13 **454a-455a** BK I H 5 [1278 1–14] **475a b** CH 6 [78b30–37] **476 b** CH 9 [1280 3 34] **477d-478a** K IV CH 4 [129 a7 10] **490b** K VI CH [33 a25 34] **534d** CH 15 [334 16 4] **539a b**

10 HIPPO RATES *Airs Waters Pla s* p r 6 **15d 16a**

12 EPICTETUS *Discourses* BK I CH 19 **126a** CH 9 **137 d**

14 PLUTAR H *Lycu gus* **46c-47a** / *Lycurgus Num* **62a** / *C la u* **185b-186a** / *M cus C to* **278b 279a 287b d** / *C sus* **439a**

15 TA TU *A nal* BK X V **151d 152**

18 AUGU TINE *C ty f G d* BK X X H 15 **521a-c**

19 AQU NA *Summ Th l gic* RT I Q 21 A R P 3 **124b 125b** Q 8 A 3 REP **430c 431d** Q 92 A I R 2 **488d-489d** Q 96 A 4 **512d 513c** P RT I–I Q A 4 R 3 **618a d**

20 AQU N *Summ Theologica* PART I I Q 98 A 6 R P **244c 245b** Q 4 A R P 3 **304a 305a** A 4 ANS **306d 307c** Q 105 A 4 N and REP I 4 **318b 321a** PART II Q A R P 3 **434c 435d** Q 183 A I **625 626a**

22 CH UC R *P T le* par 65–67 **531 532a**

23 HO B *Leviath* ART **110b 111a** PART IV **261d 262**

25 M NTA GNE *Ess y* **219b d 344d 345**

2d Criticisms of the doctrine of natural slavery

3 Slavery s a social inst t tion the conven tionality of slavery

3a The acquis t on of slaves conquest pur chase indenture forfeiture

(3 *Slavery as a social institution: the conventionality of slavery.* 3a *The acquisition of slaves: conquest, purchase, indenture, forfeiture.*)

46 Hegel *Philosophy of Right* part i par 57 26b 27a / *Philosophy of History* part i 216a b part ii 276d 277a
50 Marx *Capital* 114d [fn 3] 128d 129a 361b [fn 1] 364a 366a esp 364c 365b 376c 377a
54 Freud *New Introductory Lectures* 882d

3b Laws regulating slavery: the rights and duties of master and slave

Old Testament *Exodus* 21 1 11 20 21 26-27 32 / *Leviticus* 19 20 2 25 39-55 / *Deuteronomy* 5 14 15 12 18 3 15 16 / *Jeremiah* 34 8 17—(D) *Jeremias* 34 8 17
Apocrypha *Ecclesiasticus* 4 30 33 24 31—(D) OT *Ecclesiasticus* 4 35 33 25-33
New Testament *Ephesians* 6 5-9 / *Colossians* 3 22 4 1 / *I Timothy* 6 1-3 / *Titus* 2 9 10 / *Philemon* / *I Peter* 2 18
5 Aristophanes *Clouds* [1 7] 488a / *Frogs* [605-628] 571a b
6 Herodotus *History* bk i 21b bk vii 223c d
7 Plato *Gorgias* 271c / *Theaetetus* 528c d / *Laws* bk vi 709a 710a bk ix 757c d bk xi 772a 773a 780b c 783b-c
9 Aristotle *Politics* bk i ch 7 [1255b 0 37] 449b c ch 13 [1260 31 b8] 454d 455a c bk iii ch 4 [1277 30-b1] 474b-c bk vii ch 10 [133 33 34] 534d
14 Plutarch *Lycurgus Numa* 62a / *Coriolanus* 185b 186a / *Marcus Cato* 287b d / *Crassus* 439a-c
15 Tacitus *Annals* bk ii 30b c bk xii 121d 122a bk xiii 133c bk xiv 151d 152c
19 Aquinas *Summa Theologica* part i q 81 a 3 rep 2 430c-431d
20 Aquinas *Summa Theologica* part i ii q 104 a 4 ans 306d 307c q 105 a 4 an and r i 4 318b 321a part ii ii q 10 a 10 rep 3 434c-435d q 189 a 5 ans 693b 694c
22 Chaucer *Parson's Tale* par 65-67 531a 532a
29 Cervantes *Don Quixote* part i 280
35 Locke *Civil Government* ch iv sect 22 23 30a b ch vii sect 85 43c d
38 Montesquieu *Spirit of Laws* bk xv 112 115b
39 Smith *Wealth of Nations* bk iv 253c 254a 298c 299a
40 Gibbon *Decline and Fall* 16d 17a 620a c
42 Kant *Science of Right* 400b d-402 421c 422d
43 Constitution of the US article iv sect 2 [529-535] 16b
43 Federalist number 4 137b-c number 54 170b 171b
43 Mill *Liberty* 316b d / *Utilitarianism* 467a
46 Hegel *Philosophy of Right* additions 99 133a / *Philosophy of History* part i 216a b part ii 276d 277a
50 Marx *Capital* 364c 365b
51 Tolstoy *War and Peace* bk v 197c 215a d 216 d

3c The emancipation or manumission of slaves: the rebellion of slaves

Old Testament *Exodus* 1 14 21 2 4 / *Leviticus* 25 39-55 / *Deuteronomy* 15 12 15 23 15 16 26 5 9 / *II Chronicles* 28 8 15—(D) *II Paralipomenon* 28 8 15 / *Jeremiah* 34 8-17—(D) *Jeremias* 34 8 17
6 Herodotus *History* bk ii 71b c bk iii 117a c 118a 119b bk iv 124a d
6 Thucydides *Peloponnesian War* bk iii 435b bk iv 467a b
7 Plato *Republic* bk ix 420a b / *Laws* bk xi 772a b
9 Aristotle *Politics* bk ii ch 9 [1269a 9 b13] 465b d ch 10 [1272b 17-19] 469a bk v ch ii [1315 32-39] 518b bk vii ch 10 [1330 33 34] 534d
12 Epictetus *Discourses* bk ii ch i 139d bk iv ch i 214c d
15 Tacitus *Annals* bk iv 70c d bk xiii 132a c
20 Aquinas *Summa Theologica* part i ii q i 5 a 4 ans and rep i 3 318b 321a
29 Cervantes *Don Quixote* part ii 280c
38 Montesquieu *Spirit of Laws* bk x 62d 63a bk xv 112c 113a 114c 115b
40 Gibbon *Decline and Fall* 16d 17b 144a d 505c 509a 628c d
41 Gibbon *Decline and Fall* 82a b 452d 453a c
43 Constitution of the US amendments xiii sect i xiv sect i 18c
43 Mill *Representative Government* 332c d 340a c 351d 352b
44 Boswell *Johnson* 364a b
46 Hegel *Philosophy of History* intro 199c part ii 273c 277a
50 Marx *Capital* 145c 146a
51 Tolstoy *War and Peace* bk v 211a 213a 216c d bk vi 235 bk x 410c-421c bk xv 640b c

3d Criticisms of the institution of slavery: the injustice of slavery: its transgression of inalienable human rights

9 Aristotle *Politics* bk i ch 3 [1253b 20-23] 447 ch 6 448c-449b
12 Epictetus *Discourses* bk i ch 13 120b-c
14 Plutarch *Lycurgus* 46c-47a / *Lycurgus Numa* 62a / *Coriolanus* 185b-186a / *Marcus Cato* 278d 279c
22 Chaucer *Parson's Tale* par 65-67 531a 532a
23 Hobbes *Leviathan* part i 94b-d
35 Locke *Civil Government* ch i iv 25d 30b esp ch iv 29d 30b
38 Montesquieu *Spirit of Laws* bk x 62d 63a bk xv 109a 110d
38 Rousseau *Inequality* 357c 358b / *Political*

(5 *The political aspect of economic slavery* 5a *The disfranchisement of chattel slaves and slaves: their exclusion from the body politic or political community*)

41 GIBBON *Decline and Fall* 82a b 404d 452d
43 CONSTITUTION OF THE U S ARTICLE I SECT 2 [17 25] 11b
43 FEDERALIST NUMBER 54 170b 171b
46 HEGEL *Philosophy of History* PART II 273c PART IV 356d

5b The political deprivations of the laboring classes or wage slaves the struggle for enfranchisement the issue between oligarchy and democracy with respect to suffrage

7 PLATO *Republic* BK VIII 405c-407a / *Laws* BK VIII 740d 741a
9 ARISTOTLE *Politics* BK II CH 7 [$1267^{b}10$–19] 463b c CH 8 [1268 16–33] 464a b CH 11 [12 $3^{a}22$ ^{b}] 469d-470a BK III CH 4 [$1277^{a}30$–$^{b}7$] 474b c CH 5 [$1277^{b}33$ 12,$8^{a}25$] 475a-c CH 9-12 477c-481b passim BK IV CH 11 [1295^{b} 2 $1296^{b}2$] 495c-496c BK V 502a 519d esp CH 1 [1301 25 39] 502b c [$1301^{b}26$–1302 8] 503a b CH 2 503b d CH 3 [$1302^{b}34$ 1303 14] 504b c [$1303^{b}4$] 505a CH 4 [1304 18 39] 505d 506a CH 6 [1305 36–$^{b}21$] 507b-c CH 7 [$1306^{b}22$ 130–$^{a}28$] 508c 509b CH 8 [1308 3 14] 510a b [$1308^{b}3$ 1309 32] 511a-c CH 9 [$1309^{b}14$–1310 13] 511d 512b CH 12 [1316 39 $^{b}24$] 519c d BK VI CH 7 [$1321^{a}26$–32] 525a / *Athenian Constitution* CH 2–5 553a 555a
14 PLUTARCH *Solon* 68d 71c / *Poplicola* 79d 80a / *Poplicola-Solon* 87a / *Tiberius Gracchus* 674c 681 c / *Caius Gracchus* 681b d 689a c
18 AUGUSTINE *City of God* BK III CH 17 178d 179a
38 ROUSSEAU *Social Contract* BK II 412b-c
39 SMITH *Wealth of Nations* BK I 27b 37b BK III 168d 169a
41 GIBBON *Decline and Fall* 73b
42 KANT *Science of Right* 436d-437c
43 FEDERALIST NUMBER 54 170b 171b passim NUMBER 57 178d
43 MILL *Representative Government* 345c 346a 383d 384a 392b 399d passim esp 393c 395a 419a-c
46 HEGEL *Philosophy of History* PART II 273 PART IV 356d 364a-c
50 MARX *Capital* 137b-141b esp 138b 140a b 283d 286a 364a 368b esp 367c 368b
50 MARX ENGELS *Communist Manifesto* 415b-c 423b 424d-425a 428a 428d 429b-c

6 Political enslavement or subjection

6a Slavery as the condition of men living under tyrannical government

5 EURIPIDES *Suppliants* [4 9 456] 262a b
6 HERODOTUS *History* BK VII 238b-c
7 PLATO *Republic* BK VIII 413d-416a BK IX 420a / *Laws* BK VI 709d 710a / *Seventh Letter* 805d
9 ARISTOTLE *Politics* BK III CH 14 [1285^{a} 29] 483b-c BK IV CH 10 [1295^{a} 24] 495a b BK V CH 11 [1313 34 1314 29] 516a 517 BK VII CH 7 [$1327^{b}19$–32] 531d 532a
10 HIPPOCRATES *Airs Waters Places* par 16 15d 16a par 23 18a-c
15 TACITUS *Annals* BK I 1b c 3a b
19 AQUINAS *Summa Theologica* PART I Q 81 A 3 REP 2 430c-431d Q 96 A 4 512d 513c
20 AQUINAS *Summa Theologica* PART I II Q 105 A 1 REP 5 307d 309d
23 HOBBES *Leviathan* PART II 110b-111a 114d 115a 150c 151a
35 LOCKE *Civil Government* CH III SECT 17 28d 29a CH IV 29d 30b CH VII SECT 93 45d-46a CH XIV SECT 163 63a b
38 MONTESQUIEU *Spirit of Laws* BK III 12a 13c BK IV 15a c BK V 28c BK VI 33d 34d BK XII 94d 95a BK XIII 99b-100c BK XV 109a b 110d 111a
38 ROUSSEAU *Inequality* 356b-358b 360 b 361c d / *Social Contract* BK I 388a-c 389a 390d
40 GIBBON *Decline and Fall* 33a 34a c 51c d 154b c 342a b 523d 524a 592a
41 GIBBON *Decline and Fall* 125a 161c 162b 320d 321b
43 MILL *Representative Government* 342b-344d
46 HEGEL *Philosophy of History* PART I 222a-c PART III 289b 302a d

6b Subjection as the condition of men living under benevolent despotism or paternalistic government

9 ARISTOTLE *Ethics* BK VIII CH 11 [1161 10-2] 413b-c / *Politics* BK I CH 2 [125 $^{b}19$–26] 446a CH 7 [$1255^{b}16$–20] 449b BK III CH 14 [1285^{b} 29–34] 484a
14 PLUTARCH *Romulus* 21a 27c
15 TACITUS *Histories* BK IV 271b
19 AQUINAS *Summa Theologica* PART I Q 81 A 3 REP 2 430c-431d Q 92 A 1 REP 2 488d 489d Q 96 A 4 512d 513c
23 HOBBES *Leviathan* PART II 110b-111a
30 BACON *Advancement of Learning* 27a-c
35 LOCKE *Civil Government* CH VI SECT 61 38a b SECT 74 6 41b-42b CH XIV SECT 162 63a
36 STERNE *Tristram Shandy* 216b
38 MONTESQUIEU *Spirit of Laws* BK XII 94d 95a
38 ROUSSEAU *Inequality* 357a b
40 GIBBON *Decline and Fall* 50a 154b-c 255c d 342a b
41 GIBBON *Decline and Fall* 81d 82a
42 KANT *Science of Right* 439a-c
43 MILL *Liberty* 271d 272a 273b d / *Representative Government* 340a-c 342b-344d
46 HEGEL *Philosophy of Right* ADDITIONS 111 134d 135a / *Philosophy of History* INTRO 172b d

52 DOSTOEVSKY *Brothers Karama ov* BK V 127b-137c passim

6c The trans tion from subjection to cit zen ship the conditions fitting men for self go ernment

6 H RODOTUS *History* BK III 120b c BK V 167 b 171c 175b BK VI 187d 193b c BK IX 314a,c
9 ARISTOTLE *Politics* BK II CH 12 470b-471d K III CH 15 [286b8- 2] 484d-485a BK IV CH 12 496d 497b CH 13 [1297b16-28] 498a BK V CH 4 [1304 18-38] 505d 506a BK VI CH 4 522 523b / *Athenian Con titution* CH 2 13 553a 558c
10 HI POCRATES *A rs Waters Places* par 16 15d 16 par 23 18a c
14 PLUTARCH *Rom lus* 22c
15 TACITUS *A nals* BK XI 106a 107b
35 L CKE *Ci il G ernme t* CH VI I SECT 100-II 47 51a CH X V SECT 162 166 63a 64a
38 M NTESQUIEU *Spir t of Laws* BK X V 107b-d BK XV 114c 115b BK XVI 118b c BK XV I XV I 122a 125c BK XV II 126a
38 ROUSSE U *Inequal ty* 324a / *Social Co tract* BK I 402b-403a BK III 411a-c 422c-423a
40 GI BON *D cl ne and Fall* 15b c 513b c 521a 523a c 624b-c
41 GIBB N *Decl e a d Fall* 562c 565a esp 562c d 563d 564
42 KANT *Scien of Ri ht* 436d-437c
43 FEDERAL ST NU BER 39 125b NUMBER 55 174c d
43 M LL *Liberty* 267d 268b 271d 272a / *R pre ent tive G ernment* 328d 331a 339d 340 344 d pa im 350b 355b
46 H G L *Philosophy f History* NTRO 161a-c 199b-c PART I 222a-c PART II 271c d 273c PART IV 346a 364d

6d The mperi listic subject on or nslavement of conquered peopl s or colonial de pendencies

OL TE TAMENT *E odus* 1 8 14 5 / *I K ng* 9 20 23—(D) *III K n s* 9 20 3 / *II Ch r icles* 8 7 8—(D) *II P al pomenon* 8 7 8
APO RYPH *I Macc b es* 1 4 -64—(D) OT *I M cl b es* 1 43 67 / *II Ma c b e* 5 1 7 42—(D) OT *II Machabe s* 5 1 7 4
6 H RODOTU *Hi t ry* BK I 4a 6 16b 20b 30b 31a 35 36a 37b-40b 46 -48a BK IV 139a 1 9d BK V VI 184a 191c BK VI 222b-c 225d 226b
6 THUCY D *P l po es n Wa* K I 358a 367b 369 379b-c 384d-385b K I 403b 404a 406a-407b BK I 424d-434c BK V 461c-463 468a 469b BK V 504c 508a BK VI 529b-d K VII 559b d
9 ARISTOTL *Pol tic* BK CH 2 [52b1-9] 445 d CH 6 448c-449b CH 8 [56b20-25] 450c K C 3 [284 26- 2] 482b-c K V CH [3 4b 3 4] 528d 529a CH 14 [333b38 334a2] 538d

13 VIRGIL *Aeneid* BK VI [845-853] 233b 34a BK VIII [714 731] 278a b
15 TACITUS *A n als* BK I 17c d BK IV 76a 82d 83a BK XII 117c d BK XIV 149a b / *Hi tories* BK IV 286c 287a 290a d
18 AUGUSTINE *C ty of G d* BK IV C I 15 196c 197a BK V CH I 216d 218a BK XIX CH 21 524c d
23 MACHIAVELLI *Prince* CH III V 3c 8c CH VIII 14a c
23 HOB ES *Leviathan* PART II 110b 111a CON CLUS ON 280b 281a
26 SHAKESP ARE *1st Henry VI* 1a 32a c / *2nd Henry VI* 33a 68d / *Henry V* 532a 567a c
32 MILTON *Samson Agonistes* [241 276] 344b 345b
35 LOCKE *Ci il Government* CH XVI 65d 70c esp SECT 176 66a b
36 SWIFT *Gulliver* PART I 24b 25a PART IV 182b 183a
38 MONT QUIEU *Sp rit of Laws* BK X 62b 63d BK X 83c-84c BK XIII 96d 97a BK XV 109b-c
38 ROUSSEAU *Social Contra t* BK I 389d 390d
39 S ITH *Wealth of N tions* K IV 248b d 251 d 253a c 288b-c
40 G BBON *Decl and Fall* 14d 16b 17d 18a 33d 34a,c 147a b 420b d 518b 519a passim 550b 551b 608b d 609 620a 632d
41 GIBBON *Decline and Fall* 51a 53b passim 420 443b c
42 KANT *Scienc of R ght* 413d 454a 455a
43 DECLARATION OF INDEPEND NCE 1a 3b
43 MI L *Rep esentative Go ernment* 427a b 436b 442d passim
46 H GEL *Philo ophy f Right* PART III par 351 112a b / *Philosophy of History* P RT I I 299a-c
50 MARX *Cap tal* 372c 374b 379a 383d pas im

7 The analogy of ty anny and slavery in the re lat ons between pass ons and reason or will human bondage

NEW TE TAM NT *John* 8 31-36 / *Romans* 6 6-23 7 14 8 21 / *Gal t ans* 4 -5 1 / *Titus* 3 3 / *H brews* 14 5 / *II Peter* 2 19
7 PLATO *Phaed us* 120b-c / *Gorgias* 275 276a / *Republ* K I 296b-c BK IV 347d 348d BK X 416a-418 419b-421a 425 427b / *Th a t tu* 528 529 / *Seventh Letter* 806a 814b
9 ARI TOTLE *Ethics* BK VII CH 5 [1148b32 149 15] 399b / *P litics* BK I CH 5 [1254 33 b9] 448
12 EP TETU *D s ot es* K I CH 29 137 d K IV CH 213 223d H 4 225a b
12 AURELIUS *Med t t ons* BK VII ECT 68 284 d
17 P OTINU *Sixth Enn ad* TR V I CH 343a b
18 AUGU TINE *Co fe ion* K V p I 5 42 d / *C ty f G d* BK C 3 190 K X CH II 386b H 5 389a b K X X CH 15 521a-c K XX H 16 573b 574a

(7 *The analogy of tyranny and slavery in the relations between passions and reason or will: human bondage*)

20 AQUINAS *Summa Theologica* PART I II Q 72 A 2 REP 4 112b 113a
22 CHAUCER *Parson's Tale* par 65-67 531a b
27 SHAKESPEARE *Hamlet* ACT III SC II [61-79] 49c d
31 SPINOZA *Ethics* PART IV PREF 422b
32 MILTON *Paradise Lost* BK VI [169-188] 200a BK X [144-156] 277b BK XII [79-110] 321a b
36 SWIFT *Gulliver* PART IV 135a 184a
38 ROUSSEAU *Social Contract* BK I 393c
42 KANT *Judgement* 586d 587a
46 HEGEL *Philosophy of History* PART I 233b-c
52 DOSTOEVSKY *Brothers Karamazov* BK VI 164b d
54 FREUD *Ego and Id* 715d 716a / *New Introductory Lectures* 838d 839b

CROSS REFERENCES

For Other discussions relevant to the theory of natural slavery *see* JUSTICE 6 6c LAW 4h LIBERTY 1a WILL 7a

Other discussions of the institution of slavery *see* JUSTICE 6c LABOR 1f 5a-5c 7c(1) PROGRESS 3b PUNISHMENT 4b(3) STATE 5a 5c TYRANNY 1b WEALTH 7b(1)

The discussion of slave rebellions and of the emancipation of slaves *see* LIBERTY 6b PROGRESS 3b REVOLUTION 4a

Other discussions of the forms of economic slavery or servitude in relation to different systems of production *see* JUSTICE 8c(1) LABOR 1f 5a-5c WEALTH 6a 7b(1) and for the political aspects of economic slavery or servitude *see* CITIZEN 2c CONSTITUTION 5a DEMOCRACY 4a(1)-4a(2) LABOR 7d 7f LIBERTY 2d OLIGARCHY 4 5a

The differentiation of citizenship subjection and slavery as three conditions of men under political rule *see* CITIZEN 2b LIBERTY 1f TYRANNY 5a-5b and for factors involved in the change from subjection to citizenship *see* DEMOCRACY 4d MONARCHY 4e(2) TYRANNY 4b

Discussions of imperialism and of the government of colonial dependencies and conquered peoples *see* GOVERNMENT 5b LIBERTY 6c MONARCHY 5-5b STATE 10b TYRANNY 6

Other discussions of the slavery of men in bondage to their passions *see* LIBERTY 3a

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World* but relevant to the idea and topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collection
II Works by authors not represented in this collection

For the date place and other facts concerning the publication of the works cited consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*

I

HOBBES *Philosophical Rudiments Concerning Government and Society* CH 8
—— *The Elements of Law Natural and Politic* PART II C 1 3
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DOSTOEVSKY *Poor Folk*

II

SENECA *De Beneficiis* (*On Benefits*) BK III CH 18 25
LA BOÉTIE *Anti Dictator* the *Discours de la servitude volontaire*
BODIN *The Six Bookes of a Commonweale* BK I C 5
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VOLTAIRE "Master Slaves," in *A Philosophical Dictionary*
FRANKLIN *Essay on the African Slave Trade*
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Chapter 88 SOUL

INTRODUCTION

IN the language of the poets as well as in the discourse of the philosophers body and soul are correlative terms Each affects the meaning of the other The words are used together in daily speech Men who are unaware of or deny the metaphysical and theological significance of having a soul nevertheless use the word soul with a sense of contrast to body even if only to refer to vague manifestations of spirit —feelings and sympathies which seem to be alien to the world of matter

With few exceptions traditional theories of the soul involve its distinction from and relation to the body Berkeley represents one of the major exceptions Denying the reality of matter he conceives the soul as existing in and by itself souls or spirits differ from God as finite from infinite spiritual beings The something which knows and perceives and which exercises divers operations as willing imagining remembering Berkeley says is what I call *mind spirit soul* or *myself* Berkeley therefore would not speak of himself or other men as having souls but rather as *being* souls

The other major exception is exemplified by Lucretius It is not that Lucretius denies soul as Berkeley denies body Nor does he deny that soul adds something to body which differentiates living organisms from inorganic things On the contrary he declares the mind to be a part of man no whit less than hand and foot and eyes are parts of the whole living being Distinct from mind soul is also part of a living being Mind and soul are held in union one with the other and form of themselves a single nature but whereas the mind is as it were the lord or head of the whole body the rest of the soul spread abroad throughout the body obeys and is moved at the will and inclination of the mind

But when Lucretius refers to mind and soul as parts of the body he means no more than is implied in speaking of the hand and eye as parts of the body The nature of mind and soul is bodily he writes Just as flesh and bones are composed of atomic particles so the mind is formed of atoms exceeding small and smooth and round and the soul is made of very tiny seeds linked together throughout veins flesh and sinews

APART FROM THESE exceptions the traditional discussion of soul considers it as somehow conjoined with body to constitute a whole of which it is the immaterial principle or part Even those who like Descartes define the soul as an immaterial substance capable of existing by itself do not actually ascribe to the human soul complete independence of the human body Nor do the theologians who think of God as a purely spiritual being and of angels as immaterial substances attribute soul to them

Precisely because God and the angels do not have bodies neither do they have souls Whether everything which has a body also has a soul is another question It is variously answered but certainly those who like Plato and Plotinus speak of a world soul or a soul of the universe confirm the point that soul is the co principle or complement of body The same point appears in theories of the celestial bodies which conceive them as being alive and as therefore having souls

Unfolding to Socrates the story of the creation Timaeus says Using the language of probability we may say that the world became a living creature endowed with soul and intelligence by the providence of God To the world Timaeus explains God gave a body smooth and even having a surface in every direction equidistant from the centre a body entire and perfect and formed out of perfect

bodies And in the center he put th soul which he diffused throughout the body mak ing it also to be the exterior environment of it

Comparing the magnetic force of the lod stone with the animation of a soul Gilbert says that this one eminent property is the same which the ancients held to be a soul in the heavens in the globes and in the stars in sun and moon The ancient philosophers all seek in the world a certain universal soul and declare the whole world to be endowed with a soul Aristotle held that not the universe is animate but the heavens only As for us Gilbert writes we deem the whole world ani mate and all globes stars and this glorious earth too we hold to be from the beginning by their own destinate souls govern d Piti able is the state of the stars abject the lot of earth if this high dignity of soul is denied them while it is granted to the worm the ant the roach to plants and morels for in that case worms roaches moths were more beauteous objects in nature and more perfect inasmuch as nothing is excellent nor precious nor eminent that hath not a soul

On the question whether the earth ea h heavenly body or the whole world is endowed with life intelligence and soul Kepler differs from Gilbert Augustine from Plato and Plo tinus Aquinas from Aristotle Nevertheless the many sided controversy indicates the tra ditional connection of soul with life and mind on the one hand and with animate or organic bodies on the other—bodies which manifest certain properties and tendencies to motion

THE MAJOR ISSUES CONCERNING soul seem to follow from these traditional associations Does the soul which is somehow conjoined with a body exist as an immaterial substance or princi ple in such a way that the being composed of body and soul consists of two d st nct sub stances or entities united as related parts of a wl ole? Or is the soul the substantial form of an organic body with the consequence that the form an l matter together constitute a single composite substan e which is tl e living thing? In the latter alternative the unity of soul and body according to Aristotle is like that of tl e wax and tl e shape given to it by the die

On either conception of soul and its relation to body or matter further questions arise con cerning the soul s existence apart from the body Does it exist before being united to the body? Does it exist after the union is dissolved? How does it exist when it exists separately or apart from matter? For those like Lucretius who conceive the soul as itself composed of material particles within the framework of the body such questions can have little mean For those like Plato and Descartes who con ceive the soul as an immaterial entity having being in its own right these questions can be im mediately answered in favor of the soul s ca pacity for separate existence Only when th soul is conceived as a form wh ch together with matter constitutes the substance of a living body does there seem to be both meanin and difficulty to the question whether the soul con tinues to endure separately when a plant an animal or a man dies i e when such composite substances decompose

If the individual soul ceases to be when the body with which it is somehow united peri h s it is as mortal as the body The traditional theories of personal immortality—such as the Platonic myths concerning the transmi ration or reincarnation of souls and the Christian doctrine of man s immortal soul specially created for union with the body but destined to survive its separation from the body—are theories which involve conceptions of the soul as capable of self subsistence The controversy over these doctrines is dealt with in the chapter on IMMORTALITY Here are we concerned to see how different implications for immortality necessarily follow from various theories of the soul

Still other issues concerning soul arise in con nection with other chapters For example the question whether soul is to be found only in living things or only in animals but not in plants or in man alone is discussed in the chap ters on LIFE AND DEATH and on MIND If soul on any conception is the principle or cause of l fe then the distinction between animate and inanimate bodies is identical with the distinc tion between things which have and things which do not have a soul If furthermore the kind of life possessed by a vegetable or plant is radically different from animal lif and that in turn fro n human life then souls too may ha e

to be differentiated in kind according to the mode of life or the range of vital powers of which each type is the principle

Some writers however tend to equate soul with mind or understanding When as by Descartes soul is identified with rational soul or thinking substance it is usually attributed to man alone Soul is then not thought necessary to explain the phenomena of life in plants and animals at least in no sense of soul which implies either an incorporeal or a formal principle that is anything beyond the complex interaction of organic parts Other authors like Locke who conceive soul or understanding not merely in terms of rational thought but also in terms of sensation imagination and memory may exclude plants but not animals from the possession of soul or mind

Descartes takes notice of these ambiguities in the traditional use of the word soul Probably because men in the earliest times he writes did not distinguish in us that principle in virtue of which we are nourished grow and perform all those operations which are common to us with the brutes from that by which we think they called both by the single name *soul* then perceiving the distinction between nutrition and thinking they called that which thinks *mind* believing also that this was the chief part of the soul But I perceiving that the principle by which we are nourished is wholly distinct from that by means of which we think have declared that the name *soul* when used for both is equivocal and I say that when soul is taken to mean the *primary actuality* or *chief essence of man* it must be understood to apply only to the principle by which we think and I have called it by the name *mind* as often as possible to avoid ambiguity for I consider the mind not as part of the soul but as the whole of *that soul* wh ch thinks

In another place he uses the word soul to stand for that subtle fluid styled the animal spirits which pervading the o gans of brute animals accounts for the r peculiar type of animation We can recognize no principle of motion in them beyond the d sposition of their organs and the continual discharge of the animal spirits that are produced by the beat of the heart as it rarefies the blood Soul in th s sense is not to be confused with the incorporeal and spiritual nature of man s soul It is something corporeal of a fine structure and subtle spread throughout the external body and the principle of all sensation imagination and thought Thus there are three grades of being Body the Corporeal or soul and Mind or spirit

IN THE OPENING PAGES of his treatise *On the Soul* Aristotle says that to attain any assured knowledge about the soul is one of the most difficult things in the world The d fficulty seems to apply both to *what the soul is* and to *whether it exists* The questions are connected Even Lucretius who regards the soul as material in nature does not claim to know its existence by direct observation It is not like the body itself or like other parts of the body a sensible object It must be inferred to exist Just as the existence of unobservable atoms is inferred in order to explain the constitution and change of all natural objects so the existence of soul is inferred in order to explain the constitution and motion of living things Those who conceive the soul as immaterial—whether as substance principle or form—would seem to face an even greater difficulty in establishing its existence and in describing its nature Admittedly the soul as some sort of immaterial being cannot be discovered by observation and experiment The alternatives which represent traditional solutions of the problem seem to include the soul s reflexive knowledge of its own existence inferential knowledge about the soul based on ob erved facts various religious beliefs concerning the nature and destiny of the soul and the postulation of the soul s existence on practical not theoretic grounds

Not all writers agree with Aristotle that the soul is an object difficult to know or with Kant that it is absolutely mpos ible for us to reach any sound theoretic conclusions about the soul s exist nce Descartes for example says that if there are any persons who are not sufficiently persuaded of the existence of God and of the soul by the reasons which I have brought forward I wish them to know that all other things of which they perhaps think themselves more assur d (su h as possess ng a body and that there are stars and an earth and so o) are less ce tain

The argument for the soul s existence which

precedes this remark is the famous *Cogito ergo sum*— I think therefore I am From the fact that in the very act of doubting the existence of everything else he could not doubt that he was doubting and hence thinking Descartes assures himself of his own existence or more precisely of the existence of himself as a thinking being I knew he writes that I was a substance the whole essence or nature of which is to think and that for its existence there is no need of any place nor does it depend on any material thing so that this me that is to say the soul by which I am what I am is entirely distinct from body and is even more easy to know than is the latter and even if the body were not the soul would not cease to be what it is

Locke appears to agree that if I doubt of all other things that very doubt makes me perceive my own existence and will not suffer me to doubt of that I have as certain perception of the existence of the thing doubting he goes on as of that thought which I call doubt Experience then convinces us that we have an intuitive knowledge of our own existence and an internal infallible perception that we are

But Locke does not turn the proposition that a thinking being exists into the assertion that a spiritual being the soul as an immaterial substance exists We have the idea of matter and thinking he writes but possibly shall never be able to know whether any mere material being thinks or no it being impossible for us by the contemplation of our own ideas without revelation to discover whether Omnipotency has not given to some systems of matter fitly disposed a power to perceive and think or else joined and fixed to matter so disposed a thinking immaterial substance it being in respect of our notions not much more remote from our comprehension to conceive that God can if he pleases superadd to matter a faculty of thinking than that he should superadd to it another substance with a faculty of thinking

For Locke however our idea of soul is as clear as our idea of body Our idea of body he says, is an extended sol d substance capable of communicating motion by impulse and our idea of soul as an immaterial spirit is of a substance that thinks, and has a power of exciting motion in body by willing or thought I know that people whose thoughts are immersed in matter and have so subjected their minds to their senses that they seldom reflect on anything beyond them are apt to say that they cannot comprehend a thinking thing which, perhaps is true but I affirm when they consider it well they can no more comprehend an extended thing And in another place he adds If this notion of immaterial spirit may have perhaps some difficulties in it not easy to be explained we have therefore no more reason to deny or doubt the existence of such spirits, than we have to deny or doubt the existence of body because the notion of body is cumbered with some difficulties very hard and perhaps, impossible to be explained or understood by us

Berkeley differs from Locke not only in maintaining that we have no idea of matter at all but also in holding that if we use the word idea for sense impressions or the imag s derived from them we can have no idea of soul or spiritual substance But we can he thinks, form what he calls a notion of the soul which grasps the meaning of the word spirit as signifying that which thinks wills or perceives He differs from Locke further in proportion as he tends to agree with Descartes, asserting that the existence of a spiritual substance a thinking being necessarily follows from the undeniable existence of thinking itself

For both Descartes and Berkeley the immortality of the soul can be directly concluded from our knowledge of the soul s existence and nature The soul writes Berkeley is indivisible incorporeal unextended and it is consequently incorruptible Nothing can be plainer than that the motions changes decays and dissolutions which we hourly see befall natural bodies cannot possibly affect an active simple uncompounded substance such a being therefore is indissoluble by the force of nature that is to say the soul of man is naturally immortal

The arguments in Plato s *Phaedo* for the proper existence of the soul before it joins a particular body and for its existence after it leaves the body to dwell apart before entering another body—arguments in short for the

soul s immortality—seem to stem from a slightly different principle It is not merely that the soul is simple or uncompounded and hence indissoluble or that the knowledge we have of the absolute ideas requires us to posit a principle of knowledge other than the bodily senses which can apprehend only changing things In addition Socrates argues that the knower must be like the known If it is the soul which knows the unchangeable and eternal essences it must be as unchangeable and eternal as they are When the soul uses the body as instrument of perception Socrates says it is then dragged by the body into the region of the changeable

But when returning into herself she reflects then she passes into the other world the region of purity and eternity and immortality and unchangeableness which are her kindred

AGAINST ANY FORM of argument for the existence and immortality of the human soul which proceeds from the nature of our thought or knowledge Kant takes the position that the premises do not warrant the conclusion He claims to expose the fallacies in what he calls the paralogism of a rational psychology The I of the *Cogito ergo sum* may be the necessary logical subject of all our judgments but this does not give us intuitive knowledge of a really existing substance which has the attributes of simplicity spirituality and permanence or immortality

In all our think ng Kant writes the I is the subject in wh ch our thoughts are inherent nor can that I ever be used as a determination of any other thing Thus everybody is constrained to look upon himself as the substance and on thinking as the accident of his being But he goes on though the I exists in all thoughts not the slightest intuition is connected with that representation by which it might be dist nguished from other objects of intuition Hence it follo s that in the first syllo ism of transcendental psychology reason imposes upon us an apparent knowledge only by representing the constant logical subject as the knowledge of the real subject in hich that knowledge inheres Of that subject however we have not and cannot have th sl ghtest knowledge In spite of this the proposition that the soul is a substance may well be allowed to stand if only we see that this concept cannot help us on in the least or teach us any of the ordinary conclusions of rational psychology as for instance the everlasting continuance of the soul amid all changes and even in death and that it therefore signifies a substance in idea only and not in reality

Similarly with respect to the simplicity of the soul Kant contends that the absolute but merely logical unity of apper eption or thought is illegitimately converted into the absolute unity of a real substance The proposition *I am a simple substance* he declares teaches us nothing at all with reference to myself as an object of experience Its only value is to enable us to distinguish the soul from all matter and thus to exempt it from that decay to which matter is at all times subject

To this extent rational psychology may guard our thinking self against the danger of materialism The concept of the soul as an immaterial and simple sub tance may thus function regulatively but we deceive ourselves with the illusion of kno l d e when we treat that concept as if it had intuitive content—when as he says we change thoughts into things Kant does not deny that the I is substantial in concept or simple in concept Though th se propositions are incontestably true he says nevertheless what we really wish to know of the soul becomes by no means known to us in that way because all these predicates are with regard to intuition non valid entailing no consequences with regard to objects of experience and therefore entirely empty

The existence and immortality of the soul is for Kant a postulate or demand of the practical reason Of the psychic substance regarded as an i nmortal soul it is absolutely impossible to obtain any proof from a theo etical point of v ew but if such an object must be thought *a p iori* in order for pure practical reason to be used as duty commands it becomes what Kant calls matter of faith Immortality seems to him rationally required as th practically necessary condit on for the fulfillment of the moral law and the endl s progress of the soul towa d holin ss of will.

William J mes questions even such pract cal arguments for the soul The imperishabil ty of

a simple substance does not he thinks guarantee immortality of a sort *we care for* Nor following Locke does it seem to him that a substantial soul is required for personal identity and moral responsibility Writing as an empirical or scientific psychologist who feels entirely free to discard the word Soul because he finds the concept useless so far as accounting for the actually verified facts of conscious experience goes James tells those who may find any comfort in the idea that they are perfectly free to continue to believe in it for our reasonings have not established the non existence of the Soul they have only proved its superfluity for scientific purposes

JAMES CONCLUSION THAT the substantial Soul explains nothing and guarantees nothing along with the arguments of Kant and Locke may not apply to the soul conceived as the principle of life rather than as the agent of thought or to the soul conceived as the form of an organic body rather than as a spiritual being associated with or somehow imprisoned in the body Precisely because this other conception affirms reality of soul as something other than a complete substance precisely because it applies to plants and animals as well as men this other conception of soul would seem to require a different sort of criticism

The Greek and Latin words—*psyche* and *anima*—which we translate by soul seem to have life as their primary connotation In the *Cratylus* Socrates suggests that those who first used the name *psyche* meant to express that the soul when in the body is the source of life and gives the power of breath and revival Other dialogues express the Greek conception of the living thing as that which has the power of self motion and ascribe this power to the soul as source In the *Phaedo* for example Socrates asks What is that the inherence of which will render the body alive? to which Cebes answers Soul and agrees with Socrates further statement that whatever the soul takes possession of to that he comes bearing life In the *Laws* Cleinias having identified the power of self motion with life the Athenian Stranger gains his assent to the proposition that whatever has life or self motion also has soul

To this much Aristotle also agrees What has soul in it he says differs from what has not in that the former displays life to which he adds that living may mean thinking or perception or local movement or movement in the sense of nutrition and growth so that we must think of plants also as living and as having souls But Aristotle goes further In defining soul as the cause of life and in differentiating three kinds of souls—vegetative sensitive and rational—according to the vital powers manifested by the activities of plants, animals and men he uses his general theory of corporeal substances to state precisely what the soul is and how it is related to the body

Corporeal substances are according to him all composite of two principles form and matter What is called matter is potentiality what is called form actuality As exemplified in works of art wood is the matter which has the potentiality for a certain shape and a certain function that is the actuality or form of a chair In the case of natural things that which determines the essential whatness of a body is its form or as Aristotle sometimes says its formulable essence

If living things are essentially distinct from inert bodies as Aristotle supposes them to be then the forms which determine their essences must be different from the forms of inanimate substances It is this difference in forms which Aristotle appropriates the word soul to signify In each kind of living thing the soul is the substantial form or the first grade of actuality of a natural body having life potentially in it

He speaks of the first grade of actuality here to distinguish merely being alive or besouled from the various acts which as operations of the vital powers constitute living If an axe or an eye had a soul it would consist of its power to cut or to see not in its actually cutting or seeing While nourishing or thinking is actuality corresponding to the cutting and the seeing the soul is actuality in the sense corresponding to the power of sight and the power in the tool As the pupil *plus* the power of sight constitutes the eye so the soul *plus* the body constitutes the animal

From this conception of soul as the form or actuality of a living substance it indubitably

follows Aristotle says that the soul is in separable from its body or at any rate certain parts of it are—for the actuality of some of them is nothing but the actualities of their bodily parts Where Plato holds that the soul is prior in existence to the body Aristotle holds that soul and body come into existence together when the organism is generated Where Plato attributes an independent mode of being to the soul distinct in character from that of bodies Aristotle says that the soul cannot be without a body Yet it cannot *be* a body it is not a body but something relative to a body That is why it is *in* a body and a body of a definite kind being nothing more than the actuality or formulable essence of somethin that possesses the potentiality of being besouled

FURTHER CONSEQUENCES follow from these con flictin conceptions of soul In the *Timaeus* Plato advances the view that only the lo vest grade of soul—the pl nt soul—is mortal in contrast to the souls of animals and men Aristotle would seem to attribute mortality to every grade of soul If any exception is to be made it is only for the human soul because it involves the power of rational thought Mind or the po ver to think he writes seems to be a widely different kind of soul differing as what is eternal from what is perishable

The critical point is whether thinking unlike all other psychic powers is an activity of the soul alone For the most part there seems to be no case in which the soul can act or be acted upon without involving the body Thinking seems the most probable exception but Aristotle adds if this too proves to be a form of imagination or to be impossible without imagination it too requ res a body as the con dition of its existence If there is any way of acting or being acted upon proper to soul soul will be capable of separate existence if there is none its separate existence is im possible

Is there any way of acting or being acted upon proper to soul? Aristotl seems to answer this question affirmatively when he says that insofar as the realit es it knows are capable of being separated from their matter so is it also with the po vers of m nd On one interpreta tion this means that the mind or intellect is as immaterial in its mode of operation as some of its objects are in their mode of being with the further consequence that what is capable of acting apart from body is also able to exist apart from body But whether Aristotle s fur ther statement that mind set free from its present conditions is immortal and eternal applies to the intellect alone or to the rational soul as a whole has been disputed by various interpreters Adopting Aristotle s conception of soul as the form which is the actuality of life in an organic body Aquinas for one seems to think that the immortality of a rat onal soul can be demonstrated from the special character of its intellectual powers

A theory of the soul which regarded it as a simple and incorporeal substance or as having a being independent of the body would seem to harmonize more readily with the Christian belief in the human soul s special creation and its individual survival after death But Aquinas rejects such a theory on the ground that then man would be two substances or two beings not one or else if the human person is identified with the soul man would be a soul using a body rather than a single substance of com posite nature The doctrine of body and soul which holds them to be related as matter and form preserves the unity of man and in the opin on of Aquinas fits the way in which man learns through his senses exper ences passions and in thinking depend upon imagination

But though he admits that men cannot think without images Aquinas also insists contrary to Locke that thinking insofar as it involves abstract concepts cannot be performed by matter To make matter think is beyond even the power of God Unlike nourishing or sens ing *under tanding* is not and cannot be the act of a body nor of any corporeal power

This theory—that the acts of understanding by wh ch the intellect abstracts and receives universal concepts cannot be accounted for by the motions of the brain—is further discussed in the chapter on UNIVERSAL AND PARTICULAR Here we are con erned s mply to note th t fo Aqu nas the fact that th concepts ith wh ch men think are universal mea s that they are ab tracted from matter and the fact that they a abstract d f om matter means that

various acts of understanding must also be immaterial—that is not acts of bodily organs like the brain To these premises Aquinas adds one further principle namely that a thing s mode of being is indicated by its mode of operation In these terms he concludes that since the intellect has an operation *per se* apart from the body the human soul which is called rational because of its power of understanding can have a being *per se* apart from the body Hence it is something incorporeal and subsistent

Nevertheless according to Aquinas though the human soul can subsist separately it belongs to its nature to be embodied that is to be the form of a material substance The soul as part of human nature he writes has its natural perfection only as united to the body Therefore it would have been unfitting for the soul to be created without the body Furthermore if the entire nature of man were to be a soul—the soul making use of the body as an instrument or as a sailor uses a ship —there would be no need for the resurrection of the body after the Last Judgment The Christian dogma of the resurrected body more properly accords in Aquinas view with a conception of soul united to the body as form to matter for as he says in another place if it is natural to the soul to be united to the body it is unnatural for it to be without a body and as long as it is without a body it is deprived of its natural perfection

In the consideration of the relation of body and soul an opposite estimation of the body s role goes with an opposite theory of the soul s nature Socrates in the *Phaedo* describes the body as the soul s prison house or worse the source of the soul s contamination by the impurities of sense and passion In this life he says we make the nearest approach to knowledge when we have the least possible intercourse or communion with the body and are not surfeited with the bodily nature But complete purification requires the separation of the soul from the body the release of the soul from the chains of the body That is why Socrates tells his friends gathered in the cell where he is to drink the hemlock, true philosophers are ever seeking to release the soul and are always occupied in the practice of dying

It is also the opinion of Plotinus that it is evil for the soul to be in the body But Christian theologians for the most part take a contrary view Aquinas for example criticizes Origen for holding that souls were embodied in punishment of sin To him there is nothing of a penal and afflicting nature in the soul s union with the body Though Scripture says that the corruptible body weigheth down the soul and the earthly tabernacle presseth down the mind Augustine interprets this to mean not that the flesh is evil in itself but that man is beset by sin when the flesh lusteth against the spirit

There is no need therefore according to Augustine that in our sins and vices we accuse the nature of the flesh to the injury of the Creator for in its own kind and degree the flesh is good Man is both body and soul human nature is a thing of both flesh and spirit and he who extols the nature of the soul as the chief good Augustine continues and condemns the nature of the flesh as if it were evil as suredly is fleshly both in his love of the soul and his hatred of the flesh

OUTLINE OF TOPICS

1 Conceptions of soul

1a Soul as the ordering principle of the universe the world soul and its relation to the intellectual principle the souls of the heavenly bodies

1b Soul as the principle of self motion or life in living things soul as the form of an organic body

1c Soul as the principle of distinction between thinking and non thinking beings the identity or distinction between soul and mind or intellect

1d Soul as the principle of personal identity the doctrine of the self the empirical and the transcendental ego

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in **4** HOMER *Iliad* BK II [265 283] **12d** the number **4** is the number of the volume in the set the number **12d** indicates that the passage is in section d of p ge 12

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lo er halves of the pa e For example in **53** JAMES *Ps hology* **116a 119b** the passa e begins in the upper half of pa e 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lo er halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the pa e For example in **7** PLATO *Symposium* **163b 164c** the passage begins in the lower h lf of the left hand side of pa e 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One or more of the main divisions of a work (such as PART BK CH SECT) are sometimes included in the reference l ne numbers in brackets are g ven in certain cases *e g* *Iliad* BK II [265 283] **12d**

BIBLE REFERENCES The references are to book chapter and verse When the King James and Douay versions differ in title of books or in the numbering of chapte s or verses the King James version is cited first and the Douay indicated by a (D) follows *e g* OLD TESTAMENT *Nehemiah* 7 45—(D) *II Esdras* 7 46

SYMBOLS The abbreviation esp calls the reader s attention to one or more especially relevant parts of a whole reference passim signifies that the topic is discussed intermit tently rather than contin ously in the work or passage cited

For additional information concerning the style of the references see the Explanation of Reference Style f r general guidance in the use of *The Great Ideas* consult the Preface

1 Conceptions of soul

1a Soul as the ordering princ ple of the uni erse the world soul and its relation to the intellectual pr nciple the souls of the hea enly bodies

7 PLATO *C tylus* **93c d** / *Phaed us* **124b d** / *Apol gy* **204d 205a** / *Pha do* **241b 242b** / *Timaeus* **447a-455d** esp **449c-450** / *Phil bus* **618b 619d** / *La s* BK X **757d 765d** esp **762b 765d** BK X **797 798b**

8 A ISTO LE *Hea ens* BK II CH I [284 27 ^{b}1] **376** CH 12 **383b 384c** / *Met phy ics* BK XII CH 6 [1071^{b}32 1 72 3] **601d** / *S ul* BK I CH 3 [4 6^{b}26-407^{b}25] **636b 637b** CH 5 [411 6 23] **641a b**

12 EP CTETUS *Discou ses* BK I CH 14 **120d 121**

12 AUR LIUS *M d tations* BK IV SECT 29 **266a** SECT 40 **267a b** BK V SECT 30 **273a** BK VI S T 38 **277c d** BK VII SECT 9 10 **280b c** BK VIII SECT 7 **286a** BK X SECT 6–7 **297a c** BK XII S CT 30 **310a b**

13 VIRGIL *Aen id* BK I [724 751] **230b 231a**

16 KEPLER *Ep ome* BK IV **853b 856a 890a 895b 896 897a 914 b 932a 933a 959a 960a** / *H rm n e of the World* **1080b 1085b** esp **1083b 1085b**

17 PLOTINUS *Second Ennead* TR I CH 4 **36d 37b** TR II **40a 42a** TR III CH 2 **42c d** CH 13 **46c 47b** CH 16–18 **48b 50a** TR IX CH 4 **67c 68a** CH 7–9 **69c 72a** passim / *Th rd Ennead* TR I, C 1 4 **79d 80a** TR II CH 3 **84b** TR IV CH 6 **99d** TR V CH 6 **103b 104** TR VII CH 11 13 **126a 129a** TR VIII CH 4–5 **130b 131d** / *Fourth E nead* TR III CH 1 2 **141c 143b** CH 4 **143d 144b** CH 6 7 **144c 145d** CH 9–10 **146d 148b** TR IV CH 6 16 **161b 166b** CH 22 **168d 169** C 1 26–27 **171b 172a** CH 29 45 **173b 183a** passim TR VIII CH 1 2 **200d 202a** passim TR VIII CH 7 TR IX CH 5 **204b 207a c** / *F fth E nead* TR I CH 2 **208d 209a** CH 6-8 **211a 213a** CH 10 **213c** TR II CH 2 **215a c** TR IX C 1 3 **247b d** CH 13 14 **251a d**

18 AUGUSTINE *City of God* BK IV CH 11 12 **194c 196a** BK VII CH 6 **248a b** CH 9 **249d 250a** CH 13 **251c 252a** CH 23 **256b 257b** BK XIII CH 16 **367c**

19 AQUINAS *Summa Theologica* PART I Q 3 A 8 ANS **19d 20c** Q 18 A I REP I **104c 105c** Q 47 A I ANS **256a 257b** Q 70 A 3 **365b-367a**

20 AQUINAS *Summa Theologica* PART III SUPPL Q 79 A I ANS **951b 953b**

23 HOBBES *Levi than* PART II **162b**

28 GILB RT *Lo d tone* BK II **38b** BK V **104b-105d**

28 HARVEY *On Animal Generation* 426b-429b
34 NEWTON *Principles* BK III GENERAL SCHOL, 370a / *Optics* BK I 542b-543a
40 GIBBON *Decline and Fall* 767c [n 18]
42 KANT *Judgement* 565d
48 MELVILLE *Moby Dick* 115b 117a
51 TOLSTOY *War and Peace* BK V 216d 218b BK XII 561b c BK XIV 608a b
53 JAMES *Psychology* 658b 659a

1b Soul as the principle of self motion or life in living things soul as the form of an organic body

7 PLATO *Cratylus* 93b d / *Phaedrus* 124b-c / *Phaedo* 244b 246c / *Laws* BK X 763a 764a
8 ARISTOTLE *Topics* BK IV CH 6 [127b13 18] 177a b / *Metaphysics* BK V CH 8 [1017b10-17] 538b BK VII CH 10 [1035b14 28] 559a b BK VII CH 3 [1043a29-b4] 567d BK XII CH 5 [107 a2 4] 600 BK XIII CH 2 [1077a20 23] 608c / *Soul* 631a 668d esp BK II CH 1-3 642a 645b
9 ARISTOTLE *Parts of Animals* BK I CH I [641a30-641b33] 163c 164b / *Generation of Animals* BK I CH 19 [726b15 30] 266d 267a BK I CH I [731b 9 31] 272a [733b23 735a28] 274a 276a CH 3 [737 8 34] 278a b CH 4 [738b 8 27] 279 CH 4 [740b25]-CH 5 [741 30] 281d 282b BK III CH II [76 18 b27] 303b d
10 GALEN *Natural Faculties* BK I CH I 167a b
12 AURELIUS *Meditations* BK IV SECT 2 265b c BK IX SECT 9 292b d
17 PLOTINUS *First Ennead* TR I 1a 6b passim / *Second Ennead* TR II CH 13 46c 47b TR X CH 7 69 70a / *Fourth Ennead* TR 139a b TR I I CH 8 146b d CH 19 151d CH 23 153d TR IV CH 29 173b 174b TR V CH 7 188b c TR VII 191c 200c / *Fifth Ennead* TR I CH 208 209b TR II CH 2 215 -c / *Sixth Ennead* TR I CH 16 305a
18 AUGUSTINE *City of God* BK VII CH 23 256b-c BK XIII CH 2 360b 361a BK XIX CH 3 510 b BK XXI CH 3 561 d BK XXI CH 4 588b d
19 AQUINAS *Summa Theologica* PART I Q 3 A I ANS 14b 15b Q 18 A 3 ANS and REP 106b 107c Q 51 A R 3 275b 276b Q 70 A 3 ANS and REP 2 365b 367a Q 7 A I R 368b 369d QQ 75 76 378 399b Q 97 A 3 ANS 515a d
20 AQUINAS *Summa Theologica* PART I II Q 56 A I REP I 30a PART I II Q 23 A 2 REP 2 483d-484d PART Q 2 A 5 ANS and REP 3 715a 716b Q 5 A 3 737d 739a
21 DANTE *Divine Comedy* PURGATORY XV II [40-54] 80b XXV [18] 91b 92 PARADISE I [127 48] 109a b V [49-54] 111b
23 HOBBES *Leviathan* INTRO 47a b PART IV 51
28 HARVEY *On Animal Generation* 384d 390b passim 488d-496d passim
53 JAMES *Psychology* 139b 140a

1c Soul as the principle of distinction between thinking and non thinking beings the identity or distinction between soul and mind or intellect

8 ARISTOTLE *Soul* BK I CH 3 [406b26 407b13] 636b 637b
12 LUCRETIUS *Nature of Things* BK III [94 416] 31b 35c
31 DESCARTES *Discourse* PART IV 51d 52a PART 56a b 59 60c / *Meditations* 71b d II 77d 81d / *Objections and Replies* 119d 120a DEF VI 130c 135b 136b 152b d 156a passim 207a 208c d 219b 220a 224d 226d 249d 250b
35 LOCKE *Human Understanding* BK II CH XXIII SECT 5 205 b SECT 15 208c d SECT 18 22 209a d SECT 28 32 11b 212d BK XXV I SECT 12-14 223a 224b passim
35 BERKELEY *Human Knowledge* SECT 6-28 418a c SECT 89 430b c SECT 98 432a SECT 135-142 440 441c passim SECT 148 442b d
46 HEGEL *Philosophy of Right* PART I par 47 24a b
53 JAMES *Psychology* 85a b 130b 131a 139b 140a

1d Soul as the principle of personal identity the doctrine of the self the empirical and the transcendental ego

35 LOCKE *Human Understanding* BK I CH III SECT 4-5 113b-c BK I CH XXVI SECT 7 220d 221a SECT 9 9 222a 228c esp SECT I 14 223a 224b
35 BERKELEY *Human Knowledge* SECT 39 440d
42 KANT *Pure Reason* 49c 51d esp 51c d 120 129c esp 121a 124d 126a 128b 200c 204c esp 203d 204c
46 HEGEL *Philosophy of Right* PART I par 47 24 b ADDITIONS 28 121b
53 JAMES *Psychology* 188a 197a esp 191a 192b 194b 196a 213a 240a esp 213a 216b 220 221a 225b 232b-238b

2 The analysis of the powers of the soul

2a The distinction between the soul and its powers or acts

8 ARISTOTLE *Soul* BK CH I [402b9] 631d CH 5 [41 5 31] 641 d BK II [412 1 28] 642b CH 2 [413 0-414 4] 643 644 BK III CH 9 [43 5 b9] 664d 665a CH 10 [433 33 b4] 606 b
9 ARISTOTLE *Parts of Animals* BK II CH 7 [652b7 16] 177d 178a
10 GALEN *Natural Faculties* BK CH 2 168b
17 PLOTINUS *Third Ennead* TR VI CH 2 107a 108a / *Fourth Ennead* TR IV CH 3 25 169 171b
19 AQUINAS *Summa Theologica* PART Q 77 A 399 -401b AA 5-6 403d-405c Q 79 A I 414a d

(2 *The analysis of the powers of the soul 2a The distinction between the soul and its powers or acts*)

20 AQUINAS *Summa Theologica* PART I II Q 50 A 2 7c 8a Q 83 A 2 REP 3 172b 173a Q 110 A 4 350d 351d PART III Q 6 A 2 ANS and REP 1 3 741c 742a PART III SUPPL Q 70 A 1 REP 4 893d 895d

21 DANTE *Divine Comedy* PURGATORY IV [1–18] 57c XXV [37–84] 91d 92b

30 BACON *Advancement of Learning* 54b c

31 DESCARTES *Rules* XII 20a b / *Objections and Replies* 135b 136b 208c 209a

35 LOCKE *Human Understanding* BK II CH I SECT 9–25 123a 127d esp SECT 10 123b d CH XIX SECT 4 176a b CH XXI SECT 6 179d 180a SECT 14 20 181b 183a

35 BERKELEY *Human Knowledge* SECT 98 432a

53 JAMES *Psychology* 130b 131a

2b The order connection and interdependence of the parts of the soul the id ego and super ego in the structure of the psyche

7 PLATO *Phaedus* 128a 129c / *Republic* BK II IV 316a 356a BK IX 425c 426a / *Timaeus* 466a 467a

8 ARISTOTLE *Soul* BK I CH 5 [411 23 ^{b}31] 641b d BK III CH 6–13 662d 668d

9 ARISTOTLE *Motion of Animals* CH 10 [703 28 ^{b}1] 239a / *Ethics* BK I CH 13 347b-348d BK V CH 11 [1138^{b}5 15] 387a c BK VI CH 1 [1138^{b}35]–CH 2 [1139^{b} 3] 387b 388b BK IX CH 4 [1166^{b}13 24] 419d 420 / *Politics* BK I CH 5 [1254 34 1255 2] 448a c CH 13 [1260 4–8] 454c BK III CH 4 [1277 5 12] 474a BK VII CH 14 [1333 17 25] 538a

11 NICOMACHUS *Arithmetic* BK I 826d 827a

17 PLOTINUS *First Ennead* TR I 1a 6b passim / *Fourth Ennead* TR III CH 3 143b-c CH 19 151d 152b TR IV CH 17 166c d / *Sixth Ennead* TR IV CH 15 304c d

18 AUGUSTINE *City of God* BK XIX CH 13 519a

19 AQUINAS *Summa Theologica* PART I Q 77 A 4 7 403a-406b PART I II Q 9 AA 1 2 657d 659c Q 37 A 1 s 783d 784c

20 AQUINAS *Summa Theologica* PART III Q 15 A 9 REP 3 794c 795b

21 DANTE *Divine Comedy* PURGATORY IV [1 18] 57c XXV [37 84] 91d 92b

23 HOBBES *Leviathan* PART II 151 d

28 HARVEY *On Animal Generation* 444c-445c 447a b

32 MILTON *Paradise Lost* BK XII [79–97] 321a / *Areopagitica* 407b

54 FREUD *Ego and Id* 701d 703a 703c 708c 712a 717a c esp 712b-c 714b c 715c 716a / *Inhibitions Symptoms and Anxiety* 721d 722c esp 722b c / *New Introductory Lectures* 830a 840 esp 836d 839d

2c The kinds of soul and the modes of life vegetative sensitive and rational souls and their special powers

7 PLATO *Republic* BK IV 350c 353c BK IX 421a 427b / *Timaeus* 469d 470a

8 ARISTOTLE *Topics* BK V CH 4 [133^{a}28 33] 184c BK VI CH 10 [148^{a}23 37] 202b c / *Heavens* BK II CH 12 [292^{b}1 11] 384a / *Soul* BK I CH 1 [402^{b}1 403 2] 631c 632a CH 3 [407 3–6] 636b c CH 5 [410^{b}16–411 2] 640d 641a BK II CH 2 3 643a 645b

9 ARISTOTLE *Parts of Animals* BK I CH 1 [641 33 ^{b}10] 164b c / *Generation of Animals* BK II CH 3 [736 25 737 19] 276d 278a CH 4 [740^{b}25]–CH 5 [741 30] 281d 282b BK III CH 7 [757^{b}14 30] 298c d

10 GALEN *Natural Faculties* BK I CH 1 167a b

12 LUCRETIUS *Nature of Things* BK III [231 322] 33a 34b

12 AURELIUS *Meditations* BK III SECT 16 262d 263a c BK IX SECT 9 292b d

16 KEPLER *Epitome* BK IV 854b

17 PLOTINUS *First Ennead* TR I 1a 6b passim / *Second Ennead* TR II CH 3 41c 42a TR IX CH 2 67a / *Third Ennead* TR IV CH 2 97d / *Fourth Ennead* TR III CH 19 151d 152b CH 23 153d 154b TR IV CH 13 164d 165b CH 28 172a 173b TR VII CH 14 200b-c TR IX CH 3 206a b / *Fifth Ennead* TR II CH 2 215a c TR III CH 9 220d 221b

18 AUGUSTINE *City of God* BK VII CH 23 256b c CH 29 261a b BK XIX CH 13 519a / *Christian Doctrine* BK I CH 8 626c d

19 AQUINAS *Summa Theologica* PART I Q 18 AA 1 2 104c 106b A 3 ANS 106b 107c Q 69 A 2 REP 1 361c 362c Q 70 A 3 365b 367a QQ 77 83 399b 440b Q 118 AA 1 2 600a 603b PART I II Q 17 AA 8–9 692a 693d

20 AQUINAS *Summa Theologica* PART I II Q 110 A 4 REP 3 350d 351d

21 DANTE *Divine Comedy* PURGATORY IV [1 18] 57c XXV [37 84] 91d 92b PARADISE VII [121 148] 116b c

28 HARVEY *On Animal Generation* 369d 370b 386b 388a 397c 398c 441a-443b 445c 447a b

31 DESCARTES *Discourse* PART V 60b-c / *Objections and Replies* 156 d 207a

32 MILTON *Paradise Lost* BK V [469–490] 185b-186

35 LOCKE *Human Understanding* BK II CH IX SECT 11 15 140b 141a CH XXVII SECT 4-5 220a-c

36 STERNE *Tristram Shandy* 271a

42 KANT *Judgement* 465c-467a

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7 PLATO *Timaeus* 469d-470

8 ARISTOTLE *Generation and Corruption* BK I CH 5 417b 420b / *Soul* BK I CH 5 [411^{b}27 3] 641d BK II CH 2 [413^{a}20–34] 643b-c [413^{b}5

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9 ARISTOTLE *Generat on of Animals* BK II CH 4 [740b9-741a5] 281c 282a
10 G LEN *Nat al Facult es* 167a 215d esp BK I CH 1 167a b CH 5-8 169b 171a
17 PLOTI IUS *Third Ennead* TR IV CH 2 97d 98a / *Fo h Ennead* TR IV CH 22 168d 169c CH 6- 7 171b-172a
18 AUGUSTINE *Cuy f Cod* BK VII CH 23 256b-c CH 29 261a b
19 AQUINA *Summa Theol gica* PART I Q 18 A 3 RE 3 106b 107 Q 78 A 1 ANS 407b 409a A 2 409a-410a Q 118 A 1 600a 601c Q 1 9 A 1 ANS 604c 607b A ANS 607b 608d P T I II Q 7 A 8 692a c
20 AQUINA *Summa Theol gica* PART I II Q 50 A 3 R 1 8b-9 PART III SUPPL, Q 80 A 4 ANS 959 963a
28 HARV Y *On A imal Generation* 384d 390b passim 404b 418b-419d 427 -428b
31 D S ARTES *M d ations* II 78d 79a / *Ob jecti ns nd Repl s* 207a 244b-c

2c(2) The sensitive powers the powers proper to the nimal oul

7 PLATO *T maeus* 466a 467d
8 ARISTOTL *Soul* BK I CH 5 [411b27 31] 641d BK I CH 2 [413b4 10] 643c [413b 7- 4] 643d [414 1 3] 644a CH 3 [414a29-b20] 644c d BK I H 5 BK III CH 3 647b 661b BK III CH 8 13 664b 668d / *Sense and the Sensible* CH 7 [448b17 449a21] 687d 688d
9 ARISTOTL *Parts of Animals* BK I CH 1 [641 33 b] 164b-c K III CH 5 [667b2 3] 196 / *M t on of An mals* CH 10 238 239a / *Generat on of A imals* BK 1 CH 3 [736 24 737 19] 276d 278a CH 5 [741 6-30] 282a b / *Eth* K VI CH 2 [1139 7 1] 387d
10 G L N *N tu al Faculties* BK I CH 1 167a b
12 AUR L US *Med tat s* BK IX ECT 9 292b d
17 PLOTINUS *F t Enn ad* TR I CH 1 5b-c / *Fourth E ad* TR I CH 19 151d 152b H 3 153d 154b TR IV CH 20 21 167d 168c CH 3 25 169c 171b
18 AUGUSTINE *C ty of God* K VII CH 3 256b c CH 9 261 b
19 AQUINA *Summa Th l g a* PART I Q 72 A 1 RE 1 368b 369d Q 75 A 3 380 381b Q 78 A 1 407b-409 AA 3 4 410 413d QQ 80-8 427a-431d Q 1 8 A 600a 601c PART I Q 17 A 2 REP 687d 688b
21 D NT *Dwine C medy* PURG TORY XXV [34 79] 91d 92a
28 HARV Y *On A mal Generat n* 369d 370a
31 D ART *Rules* XII 19a 20a / *D cot se* P RT V 56 b 59 60c / *Med t tio* 1 78d 79a / *Obj ct ns a d R pl* 156a d 226a d
35 LOCK *Hum n Under ta d ng* BK CH IX X 138b 143d passim esp CH IX SECT II 15 140b 141 CH X SECT O 143 d CH XXVII SECT 5 220b c

2c(3) The rat onal powers the powers proper to the hum n soul

7 PLATO *Republic* BK IV 350b 353d BK VI 386d 388a BK VII 389d 390b BK IX 421a-c / *Timae is* 453b-454 / *Theaetetus* 535b 536a
8 ARISTOTLE *Metaphysics* BK IX CH 571c 572a CH 5 573a c / *Soul* BK II CH 3 [414b17 2] 644d [415a7 12] 645b BK III CH 3 8 659 -664d
9 ARISTOTLE *Hist ry of A imals* BK VIII CH 1 [588 18 b4] 114b d / *Ethics* BK I CH 7 [1097b23 1098 9] 343a-c CH 13 347b 348d K VI CH 1 [1138b35]-CH 2 [1139b5] 387b 388a / *Rhet ric* BK I CH 1 [1355b1-3] 594d
10 G LEN *Natural Facult es* BK I CH 12 173a c
12 EPICTETUS *Discour es* BK II CH -3 170a 171d BK IV CH 7 233a b
12 AUREL US *M ditations* BK II SECT 15 6 262d 263a,c BK V SECT 16 271c d BK IX SECT 8-9 292b d BK X SECT 1 302a b
17 PLOTINUS *Fourth En ead* T VIII CH 3 202c / *F fth Ennead* TR I CH 10 213d 214a
18 AUGUSTIN *City of God* BK V I CH 23 256b CH 29 261a b BK XII CH 23 357d 358a
19 AQUINAS *S mma Th ologica* PART I Q 3 A 1 REP 2 14b 15b Q 7 A 2 REP 2 31d 32 Q 76 A 5 REP 4 394c 396a Q 79 A 1 ANS 407b 409a QQ 79-80 413d-428d QQ 82 83 431d 440b Q 118 A 2 601c 603b
20 AQUINAS *Summa Theolog ca* PART I II Q 50 AA 4-5 9a 10d
21 DANTE *Di ne Comedy* PURGATORY XVIII [75] 79d 80 XXV [61 84] 92a b
28 HARV Y *On A imal Generation* 427d-428a
30 B ON *Adv ar ement f Learn g* 55b d
31 DESCA TES *D cour* PART V 56a b 59c 60c / *Me litat o* 71b d III 82d 83 V 89 93a VI 96b 103d passim / *Object o s and Repl es* 156 d 207a
31 SPINOZA *Eth cs* PART II AXIO 2 373d
32 MI TON *Pa adi e Lost* BK V [95 116] 177b
35 LOCKE *Human Understand g* K II C I VI 131b ; CH XI 143d 147b esp SECT 9-11 145b 146 1 XXI SECT 4 21 178d 183b passim esp SECT 5-6 179c 180a SECT 15 2 181c 183a C I XXI I SECT 5 205a b SECT 15 208c-d SECT 18 209a SECT 2 209d SECT 28 30 211b 212b K IV C I X V SE T 3 4 364d 365 C XV I SECT 1 3 371c 372b
36 S RN *Tristram Shandy* 270a 271b
42 KANT *Pur Reason* 41c-42b 164b c / *Judge ment* 465c 467a esp 466a c 474b-475d 522b 568c 575b esp 568c d 570c 571c 572b 575b
46 H GEL *Pl losophy of History* INTRO 168b d PART 257d 258a PA T III 304d 305b
49 D RWIN *D sce t of M* 278 b
53 JAM S *Psy h logy* 85 b
54 FREUD *I terpr t t n f D eams* 381 385c esp 385b / *U con c* 429c d / *Ge eral I t duct* 532

3 The immateriality of the soul

3a The soul as an immaterial principle, form, or substance

7 PLATO *Phaedrus* 124b-126c / *Phaedo* 223d-225c; 231c-234b / *Republic* BK X, 435a-436c / *Timaeus* 449b-450c; 452d-454a / *Sophist* 567c-d / *Laws* BK X, 761a-765d

8 ARISTOTLE *Metaphysics* BK VII, CH 10 [1035^{b}14-28] 559a-b; BK VIII, CH 3 [1043^{a}29-^{b}4] 567d; BK XIII, CH 2 [1077^{a}20-23] 608c / *Soul* BK I, CH 1 [403^{b}3-^{b}19] 632a-d; BK II, CH 1-2 642a-644c

12 AURELIUS *Meditations* BK IV, SECT 21 265b-c; BK XII, SECT 30 310a-b

17 PLOTINUS *First Ennead* TR I 1a-6b / *Third Ennead* TR I, CH 8-9 81d-82b; TR VI, CH 2 107a-108a / *Fourth Ennead* TR I-II 139a-141c; TR III, CH 2 142a-143b; CH 8 146b-d; CH 20-23 152b-154b; TR VII 191c-200c; TR IX, CH 4 206c-d / *Fifth Ennead* TR II, CH 2 215a-c / *Sixth Ennead* TR IV, CH 1 297b-d; CH 4-5 299a-300a; CH 12-16 303a-305c

19 AQUINAS *Summa Theologica* PART I, Q 51, A 1, REP 3 275b-276b; Q 75, A 1 378b-379c; AA 4-5 381b-383b; Q 76, A 1 385d-388c; A 4, REP 1 393a-394c

23 HOBBES *Leviathan* PART IV, 269d-271b

31 DESCARTES *Discourse* PART IV, 51d-52a; PART V, 59c-60c / *Meditations* 71b-d; 72d-73c; II 78a-80a; VI 96b-103d passim, esp 98c-d, 101d-102a / *Objections and Replies* 114d-115c; 119d-120a; 127c-d; DEF VI-I 130c-d; DEF X 130d; PROP IV 133c; 135d-136b; 153c-155d; 170b-c; 207d-208a; 209c; 224d-225d; 231a-232d; 261a-b; 276b-c

31 SPINOZA *Ethics* PART V, PREF 451a-452c

35 LOCKE *Human Understanding* BK II, CH XXIII, SECT 5 205a-b; SECT 15 208c-d; SECT 22 209d; SECT 28-32 211b-212d passim; CH XXVII, SECT 12-17 223a-225a passim; SECT 27 227d-228a; SECT 29 228b-c; BK IV, CH III, SECT 6 313c-315b

35 BERKELEY *Human Knowledge* SECT 26 418a; SECT 89 430b-c; SECT 141 441a-b; SECT 148 442b-d

36 STERNE *Tristram Shandy* 271a-b

40 GIBBON *Decline and Fall* 186b

42 KANT *Pure Reason* 120c-129c esp 124d-128a; 203d-204c

48 MELVILLE *Moby Dick* 27b-28

53 JAMES *Psychology* 220b-223b esp 221a-222b

3b The immateriality of the human soul in comparison with the materiality of the plant and animal soul: the intellect as an incorporeal power

8 ARISTOTLE *Soul* BK I, CH 4 [408^{b}18-29] 638c; CH 5 [411^{b}13-18] 641c-d; BK II, CH 2 [413^{b}24-29] 643d-644a; BK III, CH 4 [429^{a}10-^{b}23] 661b-662a; CH 5 662c-d

9 ARISTOTLE *Generation of Animals* BK II, CH 3 [736^{b}15-737^{a}12] 277b-d

17 PLOTINUS *Third Ennead* TR VI, CH 2 107b-c / *Fourth Ennead* TR VII, CH 8 195b-196a

18 AUGUSTINE *Confessions* BK VII, par 2 43c-d

19 AQUINAS *Summa Theologica* PART I, Q 3, A 1, REP 2 14b-15b; Q 7, A 2, REP 2 31d-32c; Q 75, AA 2-3 379c-381b; AA 5-6 382a-384c; Q 79, A 1, REP 4 414a-d; A 2, REP 1 414d-416a; A 3, REP 3 416a-417a; A 4, REP 4-5 417a-418c; A 5, REP 1-2 418c-419b; A 6, REP 1-2 419b-420d; Q 83, A 1, REP 5 436d-438a; Q 84, A 1, ANS 440d-442a; A 2, ANS 442b-443c; A 4, ANS 444d-446b; A 6, ANS 447c-449a; Q 85, A 6, ANS 458d-459c; Q 87, A 3, REP 3 46[?]b-468a; Q 89, A 1, ANS 473b-475a; PART I-II, Q 2, A 6, ANS 619d-620d; Q 35, A 5, ANS 775d-777a

20 AQUINAS *Summa Theologica* PART I-II, Q 5, A 4 9a-10b; Q 53, A 1, ANS and REP 2-3 19d-21a

21 DANTE *Divine Comedy* PURGATORY XXV [61-84] 92a-b

28 HARVEY *On Animal Generation* 494a-b

31 DESCARTES *Rules* XII 20a-b / *Discourse* PART V 60b-c / *Objections and Replies* 226a-b

3c The relation of soul and body: the relation of formal and material principles, or of spiritual and corporeal substances

7 PLATO *Charmides* 2d-3c / *Cratylus* 93b-d / *Phaedo* 220a-251d / *Republic* BK III, 334b-c / *Timaeus* 453b-454a; 466a-467d; 474d-475d / *Laws* BK X, 761b-765d

8 ARISTOTLE *Topics* BK VI, CH 14 [151^{a}20-31] 206a / *Metaphysics* BK VII, CH 10 [1035^{b}14-28] 559a-b; BK VIII, CH 3 [1043^{a}29-^{b}4] 567d; CH 6 569d-570d; BK XII, CH 10 [1075^{b}34-37] 606d / *Soul* BK I, CH 1 [403^{a}3-24] 632a-b; CH 3 [407^{b}13-25] 637b; CH 5 [410^{b}10-16] 640c; [411^{a}23-^{b}31] 641b-d; BK II, CH 1-2 642a-644c; CH 4 [415^{b}8-28] 645d-646a / *Sense and the Sensible* CH 1 [436^{b}3-8] 673b-c / *Longevity* CH 2 [465^{a}18-32] 710c-d / *Youth, Life, and Breathing* CH 1-4 714a-716b passim; CH 14 720d-721a

9 ARISTOTLE *Parts of Animals* BK I, CH 1 [640^{b}30-641^{a}33] 163c-164b; CH 5 [645^{b}14-19] 169c; BK II, CH 7 [652^{b}7-17] 177d-178a; BK III, CH 5 [667^{b}15-32] 195d-196a / *Motion of Animals* CH 9-10 238a-239a / *Generation of Animals* BK II, CH 4 [738^{b}18-27] 2[?]9c / *Politics* BK I, CH 5 [1254^{a}34-1255^{a}2] 448a-c

12 LUCRETIUS *Nature of Things* BK III [94-[?]9[?]] 31b-40c

12 AURELIUS *Meditations* BK III, SECT 3 260b; BK IV, SECT 21 265b-c; BK XII, SECT 30 310a-b

13 VIRGIL *Aeneid* BK VI [724-751] 230b-231a

14 PLUTARCH *Romulus* 29a-b

16 KEPLER *Epitome* BK IV, 893a

17 PLOTINUS *First Ennead* TR I 1a-6b / *Second Ennead* TR I, CH 5 37c; TR II, CH 3 41c-42a / *Third Ennead* TR VI, CH 4-5 108c-109d / *Fourth Ennead* TR I-II 139a-141c; TR III, CH 4 143d-144b; CH 8 23 146b-154b; TR IV, CH 18 166d-167b; CH 20-21 167d-168c; CH 23-25 169c-171b; CH 29 173b-174b; TR V, CH 1

188b-c TR VII 191c 200c esp CH 8 197c 198b TR IX 205a 207a / *Fifth Ennead* TR I CH 2 208c 209b / *S xth En ead* TR IV CH I 297b-d CH 4-5 299a 300a CH 12-16 303a 305c TR VII CH 4 5 323c 324b

18 AU USTINE *City of God* BK X CH 9 317b c BK XIII CH 2 360b 361a b BK XIV CH 5 379c 380b BK XIX CH 3 510a b CH 13 519a BK X I CH 3 561a 562a BK XXII CH 4 588b d

19 AQUINAS *S mma Theologica* PART I Q 8 A I REP 2 34d 35c A REP 2 3 35c 36b Q 51 A I ANS and REP 3 275b 276b Q 52 A I 278d 279b Q 75 A I 378b 379c A 2 ANS 379c 380 A 4 381b 382a A 5 ANS 382a 383b Q 76 385c 399b Q 81 A 3 REP 2 430c-431d Q 84 A 4 ANS 444d-446b Q 89 A I ANS 473b 475a Q 110 A REP I 565d 566d PART I II Q 4 A 5 REP 5 632c 634b

0 AQUINAS *Summa Theologica* PART I II Q 56 A 4 REP 3 32b 33c Q 58 A 2 ANS 42a-43a PART III Q 2 A I ANS and REP 2 710a 711 A 5 715a 716b Q 6 A I 740b 741b AA 3 4 742a 743d Q 8 A 2 ANS 757c 758a Q 17 A 2 R P 4 808d 809d Q 62 A I REP 2 858 859d A 4 R P I 3 861a 862a PART III SUPPL Q 70 A 3 ANS 897d 900d Q 75 A I REP 3 4 935b 937a Q 80 A I ANS and REP 956c 957 Q 0 A I ANS and R P 8-10 1025c 1032b Q 93 A I 1037d 1039a

21 DANTE *Divine C medy* PURGATORY XXV [10-108] 91c 92c

23 HOBB S *Leviath n* PART IV 250c 251b

25 MONTAIGNE *Es ays* 264a b

28 HARVEY *On An mal Generation* 431b 434a esp 433 d

30 BACON *Adva cement of Lea ni g* 49b 50b

31 DESCARTE *D s ourse* PART IV 51d 52a PART V 56a b 60b-c / *Med t tions* 72d 73 II 77d 81d passim VI 96b 103d esp 99d 101a / *Obj ct ons nd Repli s* 114d 115a c 119d 120c 127c d DE VI VII 130c d DEF X 130d PROP IV 133c 135d 136b 152b d 156 170b-c 207d 208a 219b 220a 224d 226d 231a 232d 248b 261a b 276

31 SP NOZA *Ethics* P RT II PRO II 3 377b 378 P RT V PREF 451a-452c

33 PASCAL *P nsées* 5 2 262a

35 LOCK *H m n Understand g* BK II CH SE T II 12 123d 124 CH XXI SECT 4 178d 179c CH XXI I SECT 15-32 208c 212d CH XXVII SECT 7 227d 228a

35 BERK LEY *Hum n Kn wledg* CT 18 416b-417 SECT 26- 7 418a b CT 148 442b-d

35 HUME *Human Underst nd g* SE T V D V 5 -52 472b-473c esp DIV 5 472d DIV 58 476a b

36 S RN *Trist am Sh ndy* 231 b 270a 271b

41 GIB ON *D l ne d Fall* 136d

42 KANT *J dgement* 557 558a

46 H GEL *Ph losophy of Right* ART I par 48 24b-c ADDITION 2 115d 6 118d 119a / *Ph l phy f History* PART I 255 256b

47 GOETHE *Faust* PART II [6891-6896] 168b

48 MELVILLE *Moby D k* 27b 28a 68a b

53 JAMES *Psychology* 1a-4a esp 2b 3a 118b-119b 139a 140a

54 FREUD *Interpretat on of Dreams* 154c 155a

3d The denial of soul as an imm terial prin ciple form or subst nce the atomic theory of the soul

7 PLATO *Pha do* 235b 236c 238b 240a / *Sophist* 567a 568a / *Laws* BK X 761b

8 ARISTOTLE *Generat on and Corrup i n* BK II CH 6 [334 10-15] 435a / *Soul* BK I CH 2-5 633a 641d

10 GALEN *Natural Facult es* BK I CH 12 172d 173c

12 LUCRETIUS *Nature of Things* K III [94-829] 31b-40c BK IV [722-817] 53d 54d [877-961] 55d 56d

17 PLOTINUS *Third E nead* TR I CH 3 79b c / *Fourth Ennead* TR VII 191c 200c esp CH I 4 191c 193c CH 8 195b 196a 196c 197c

18 AUGUSTINE *City of God* BK VIII CH 5 268b d

19 AQUINAS *Summa Theol gica* PART I Q 75 A 378b 379c Q 84 A 2 ANS 442b-443c A 6 ANS 447c-449a

23 HOBBES *Leviathan* PART I 80a b PART III 176d PART IV 250c 251c 269d 271b

25 MONTAIGNE *E says* 264b 267a

31 DES ARTES *Objections and Replies* 226a d

35 LOCKE *Human Understand g* BK IV CH III ECT 6 313c 315b CH X SECT 5 350 b SE T 10 351b 352 CT 17 353b-c

35 BERK LEY *Human K owledg s* CT 93 431b SECT 137 440b c S CT 141 441a b

42 KANT *Pure Reason* 126 d / *Judgement* 582b 600 d

46 H EL *Ph losophy f History* PART I 255d

51 TO STOY *War and Peace* EPILOGUE II 689c 690a

53 JAM ES *Psychology* 95a 119b

3e The corporeal or phenomen l m nifesta t on of dis mbodied souls as gho ts wraiths or spirits

OLD T STAMENT *I Samuel* 28 8 9-(D) *I Kings* 28 8-19

4 HOMER *Il d* BK XXII [54 107] 161d 162b / *Odys ey* BK X 243 249d K XX V [1 2 3] 317a 319a

5 A CHYLUS *Pers ans* [623-842] 21d 24b / *Eumen de* [94 139] 82 -c

5 A TOPHAN S *B ds* [1552 1564] 561b

6 HE ODOTUS *Hist ry* K IV 126d 127a K V 179c 180a

7 PLATO *Phaed* 232d 233b

12 LU RETIUS *Natu f Things* BK I [02 35] 2b d K IV [6-4] 44b d

13 VI IL *Aeneid* K [77 -794] 146a b K [7 9-745] 206a b K VI 211a 235a

14 PLUTARCH *Cim n* 392b-c / *C* 603d 604d / *Dion* 781d 782a / *M cus B utus* 816d 817

(3 *The immateriality of the soul* 3e *The corporeal or phenomenal manifestation of disembodied souls as ghosts wraiths or spirits*)

17 PLOTINUS *Fourth Ennead* TR VII CH 15 200c
19 AQUINAS *Summa Theologica* PART I Q 89 A 8 REP 2 479c-480c
20 AQUINAS *Summa Theologica* PART III SUPPL, Q 69 A 3 887d 889c
21 DANTE *Divine Comedy* PURGATORY III [16-33] 56a XXV [79-108] 92b-c PARADISE III [1-30] 109b-c
23 HOBBES *Leviathan* PART I 51b 52b 80a PART IV 250c 251c passim 258c d 270c 271b passim 274b-c
26 SHAKESPEAR *Richard III* ACT V SC III [118-176] 144d 145c / *Julius Caesar* ACT IV SC III [275 308] 591 d
27 SHAKESPEARE *Hamlet* ACT I SC I [40 175] 30a 31c SC IV [38]-SC V [91] 36b 37d ACT III SC IV [102 136] 55d 56a / *Macbeth* ACT III SC IV [37 107] 298a d / *Cymbeline* ACT V SC IV [30-122] 481c-482b
44 BOSWELL *Johnson* 95b 114b 115a esp 115a b [fn 1] 189a b 193b-c 373a 394c d 412a b 472b-c
54 FREUD *War and Death* 763d 764a

4 The being of the soul

4a The unity of the human soul the human mode of the vegetative and sensitive powers

8 ARISTOTLE *Soul* BK I CH 5 [410b10-16] 640c [411a23 b31] 641b d BK II CH 2 [413b10-414 4] 643c 644a BK III CH 9 [432 15-b8] 664d 665a CH 10 [433 32 b4] 666a b
9 ARISTOTLE *Ethics* BK I CH 13 [1102a27 32] 347d
17 PLOTINUS *Fourth Ennead* TR III CH 3 143b c CH 19 151d 152b TR VII CH 14 200b c TR IX CH 2 3 205c 206b
19 AQUINAS *Summa Theologica* PART I Q 76 A 1 3 385d 393a Q 78 A 4 REP 5 411d-413d Q 81 A 3 REP 2 430c-431d
20 AQUINAS *Summa Theologica* PART III Q 2 A 2 REP 2 711d 712d PART III SUPPL, Q 79 A 2 REP 3 953b 955c
21 DANTE *Divine Comedy* PURGATORY IV [1 12] 57c XXV [37-84] 91d 92b PARADISE II [127 148] 109a b

4b The issue concerning the self subsistence or immortality of the human soul its existence or capacity for existence in separation from the human body

5 EURIPIDES *Helen* [1013 1016] 307d
6 HERODOTUS *History* BK II 75b
7 PLATO *Phaedrus* 124b-c / *Meno* 179d 183a / *Apology* 211b 212a,c / *Phaedo* 220a 251d / *Republic* BK X 434d 436a / *Laws* BK XII, 793c d / *Seventh Letter* 806a
8 ARISTOTLE *Metaphysics* BK XII CH 3 [1070a21 28] 599c / *Soul* BK I CH 1 [403a3 24] 632a b CH 2 [405a29-34] 634d BK II CH I [413 3-9] 643a CH 2 [413b24 29] 643d-644a BK III CH 4 [429 29-b4] 661c d CH 5 662c d
9 ARISTOTLE *Generation of Animals* BK II CH 3 [736b15-737 12] 277b d
12 LUCRETIUS *Nature of Things* BK III [323 349] 34b c [417-1094] 35c 44a c
12 AURELIUS *Meditations* BK II SECT 14 258d SECT 17 259b d BK IV SECT 21 265b-c BK V SECT 13 271b BK VIII SECT 37 288c BK XII, SECT 5 307d 308a SECT 14 308c
14 PLUTARCH *Romulus* 29a b
17 PLOTINUS *First Ennead* TR I CH 2 1c / *Fourth Ennead* TR I 139a b TR IV CH 15 165c-d TR VII 191c 200c
18 AUGUSTINE *City of God* BK VI CH 12 243 d BK X CH 31 319b d BK XIII CH 2 360b-361a
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18 AUGUSTINE *C ty of God* BK XIII CI 16 367a d BK XIV CI 3 378a d H 5 379c 380b BK XIX CH 4 512a 513c
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7 PLATO *P aedo* 220a 251d / *Republic* BK IV 3.0c 353d
8 ARISTOTLE *Soul* BK I CH I 631a 63 d BK II CH 4 [415 14 22] 645b-c BK III CH 4 [429b 5-9] 661d [429b25 9] 662b [430a-9] 662b c
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The problem of personal identity *see* ONE AND MANY 3b(5) SAME AND OTHER 1b

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Chapter 89 SPACE

INTRODUCTION

ON the level of our everyday observations space and time seem to be the obvious the common and the connected properties of physical things We distinguish things from one another by their position in space as we mark happenings by the date of their occurrence The where and when of a thing is often used to identify it for it is generally agreed that two bodies cannot occupy the same place at the same time and that at the same time two dis tinct places cannot be occupied by the same body According to a theologian like Aquinas these limitations of space and time apply even to bodiless things *i e* to angels

An angel and a body are said to be in a place he writes in quite a different sense Whereas a body is in the place which contains it an angel is said to be in a corporeal place by applicat on of the angelic power not as being contained but as somehow containing it It follows nevertheless that at a given time an angel is not everywhere nor in several places but in only one place Nor does the incorporeality of angels permit more than one angel to be at the same time in the same place According to the *manner in which an angel is at a* place—by the action of his power— there can be only one an el in one place Aquinas declares even as there can be only one body in one place at a time

Location or position in space and spatial relationships such as higher and lower nearer and farther are so familiar and intelligible that they provide terms of reference whereby men speak metaphorically of the moral hierarchy and spirit ual distances The whole of Dante s *Divine Comedy* for example involves a spatial metaphor which sets forth the gradations of sin and the degrees of blessedness in terms of places beneath the earth and in the heavens above

As he mounts from sphere to sphere in Paradise Dante meets Piccarda Donati in the Heaven of the Moon She explains to him that this place which appears so far down is assigned to those who have violated their vows in some particular Dante wonders why she and the others do not desire a more exalted place in order to see more Piccarda replies Brother virtue of charity quiets our will and makes us wish only for that which we have and quickens not our thirst for aught else So that as we are from seat to seat throughout this realm to all the realm is pleasing as to the King who n wills us with His will and His will is our peace

This speech of Piccarda s makes it clear to Dante how everywhere in Heaven is Paradise even if the grace of the Supreme Good does not there rain down in one measure These different measures of beatitude in the diffusion of God s love and light are represented by the celestial spheres from the earth-adjacent moon to the Crystalline Heaven the outermost bound of the phys cal universe of which Dante says that it has no other Where than in the Divine Mind

WHEN THE WHOLE EXPANSE of physical space or the boundary of the universe is considered Newton no less than Dante conceives the omni presence and eternity of God as that which somehow encompasses all space and time God is not duration or space Newton writes at the end of the *Principles* but He endures and is present and by existing always and every where He constitutes duration and space In the concluding queries of the *Optics* Newton appears to think of infinite space as the D v ne Sensorium in whi h all things a e at once pres ent to God who being in all places is more able by His will to move th bod es within H s boundl ss unifo m sensor um and thereby to fo m and reform the parts of the Universe than

we are by our will to move the parts of our own bodies

The physicist does not have to turn theologian however to be confronted with the mysteries of space Even without the modern complication of the relation of its three dimensions to time as a fourth dimension the physical concept of space raises difficulties for analysis

In the tradition of western thought conflicting definitions of space seem to result from a fundamental difference in the object being defined—whether it is an inseparable property of bodies perhaps even identical with unformed matter or a reality apart from the bodies which move and have their being in it Sometimes this difference is signified by a difference between the meaning of the word place or extension and the meaning of space It appears also to be involved in the contrast between filled space and empty space (*i e* the void or vacuum) and it bears some relation to Aristotle s distinction between space and place and to Newton s distinction between absolute and relative space

The controversial character of space in physical theory may be appreciated in terms of these oppositions in meaning and the issues which they raise In addition physical theory is confronted with the problem of action at a distance (*i e* action through a void or through an ethereal medium) the problem of the infinity of space (or the question of a bounded or unbounded universe) and the distinction between one physical space and the variety of geometrical spaces

Space which at first seems easily apprehended by sense and susceptible to measurement becomes upon examination so subtle as to be almost a vanishing object Reason finds it difficult to say precisely *what* space is in itself and how it is related to matter and motion Even the familiar space of ordinary sense perception seems to have its puzzles A psychologist like James is concerned with how the different fields of touch vision and hearing coalesce to form the single space of our experience and in dealing with the process by which we learn to perceive the spatial manifold of positions and directions he cannot avoid the issue of innate as opposed to acquired space perception

PLATO S THEORY OF SPACE is set forth in the *Timaeus* as part of the likely story which Timaeus tells about the production and constitution of the universe The sensible things which come into being and pass away are according to him patterned after the eternal forms To the eternal patterns and their copies in the world of change Timaeus finds it necessary to add a third factor in order to account for the physical elements and their generation This factor he says is difficult to explain and dimly seen It is the receptacle and in a manner the nurse of all generation In contrast to the elements which are perpetually changing into and out of one another the receptacle never departs from her own nature and never in any way assumes a form like that of any of the things which enter into her The forms which enter into and go out of her are the likenesses of real existences modelled after their patterns in a wonderful and inexplicable manner

Timaeus distinguishes the three principles as that which comes to be and passes away in the process of generation that in which the generation takes place and that which the generated thing resembles and which is its source He likens the receptacle or receiving principle to a mother the source to a father and the intermediate nature to a child and adds that if the model is to take every variety of form then the matter in which the model is fashioned will not be duly prepared unless it is formless and free from the impress of any of those shapes which it is hereafter to receive from without.

Wherefore that which is to receive all forms should have no form The mother and receptacle of all created visible and in any way sensible things is not to be termed earth or air or fire or water or any of their compounds or any of the elements from which these are derived but is an invisible and formless being which receives all things and in some mysterious way partakes of the intelligible and is most incomprehensible

This third factor which Timaeus sometimes calls matter as well as receptacle he also sometimes calls space When matter and space are identified with each other under the conception of a receptacle for the forms they have the characteristics of being absolutely

formless and imperceptible to the senses Nor are they as are the forms genuinely intelligible to reason 'The third nature which is space and is eternal Timaeus says admits not of destruction and provides a home for all created things and is apprehended without the help of sense by a kind of spurious reason and is hardly real which we beholding as in a dream say of all existence that it must of necessity be in some place and occupy a space but that which is neither in heaven nor on earth has no existence

The precise meaning of this conception of space is difficult to determine Does it for example find an echo in Plotinus statement that space is a container a container of body it is the home of such things as consist of isolated parts ? But he also says that space in a strict sense is unembodied and is not itself body and that body is not a void but rather that the void must be that in which body is placed seeming thereby to imply that space is essentially the void The statement in the *Timaeus* that there can be no such thing as a vacuum may apply only to the filled space of the created heaven and earth May it not also be said that space is a void when it is identified with the formless matter of the receptacle prior to creation?

This raises further questions Is the receptacle space or matter? And is the conception of space in the *Timaeus* rightly interpreted by Aquinas in commenting on Augustine s reading of the earth was void and empty in Genesis 1 2? Augustine holds that by the word earth in this passage *formless matter is to be understood* Because of its formlessness Aquinas writes the earth is said to be *void and empty* or *invisible and shapeless* and he adds that is why Plato says matter is place

HOWEVER THESE QUESTIONS are answered one thing seems to be clear Space functioning as receptacle can be identified only with matter devoid of form not with the matter of three dimensional bodies The relation of space to matter seems to be differently conceived by Descartes Space is for him not an antecedent principle involved in the original production of sensible things but rather—as the extension of bodies—it is inseparable in existence from them It is a property which signifies the essence of material substances as thinking signifies the essence of mind or soul By extension Descartes writes we understand whatever has length breadth and depth not inquiring whether it be a real body or merely space Nevertheless he goes on to say that by extension we do not here mean anything distinct and separate from the extended object itself

Descartes considers the significance of three statements *extension occupies place body possesses extension* and *extension is not body* The first statement he thinks means no more than *that which is extended occupies place* The second statement seems to imply that the meaning of *extension* is not identical with that of *body* yet Descartes insists we do not construct two distinct ideas in our imagination one of body the other of extension but merely a single image of extended body and from the point of the view of the thing it is exactly as if I had said *body is extended* or better *the extended is extended* Finally in the statement that *extension is not body* the word extension according to Descartes expresses a purely abstract conception—nothing which in itself has any sensible reality So far as its existence is concerned the thing conceived as extension cannot be separated from body Those who think otherwise Descartes asserts are involved in the contradiction of saying that *the same thing is at the same time body and not body*

The point is summarized in his *Principles of Philosophy* by the statement that the nature of matter or of body in its universal aspect does *not consist in being hard or heavy or colored* but solely in the fact that it is a substance extended in length breadth and depth But it may be asked are the dimensions of a body the same as space? Descartes replies that the same extension which constitutes the nature of a body constitutes the nature of space not only that which is full of body but also of that which is called a vacuum

If there were a vacuum or empty space extension might be separated from body This Descartes flatly denies As regards a vacuum in the philosophic sense of th wo d e a space in which there is no sub tanc it is ev d nt that such cannot xist becau e the xten sion of p o nternal pla is not d fferent from that of body And even when we take

this word vacuum in its ordinary sense Descartes goes on we do not mean a place or space in which there is absolutely nothing but only a place in which there are none of those things which we expected to find there

These points made in the *Principles* confirm the identification of three-dimensional space or extension with body which appears in the *Rules* They seem to be further confirmed in the *Discourse* by the reference to a continuous body or a space indefinitely extended in length height or depth which is the object of the geometricians. Descartes does not however neglect the distinction between space as the extension of body and place as the position one body occupies in relation to another According to common usage he says the word place signifies that in virtue of which a body is said to be here or there He objects to those who like Aristotle mean by place the surrounding surface of a body Local motion or change of place is not he argues a change in the body s surrounding surface but a change in its relative position

It is place rather than space which Aristotle seeks to define and place in the sense of the circumference of a body rather than its position in space He rejects the notion that place is the extension of a magnitude for that would he thinks identify it with matter Place belongs to body not as matter or a property of matter but as its boundary It is Aristotle writes the innermost motionless boundary a kind of surface and as it were a vessel *i e* a container of the thing This boundary is itself made at the surface of a body by a surrounding body or bodies. If a body has another body outside it and containing it Aristotle writes it is in place and if not not

The consequences of this conception of place are first a denial of space in the sense of void or empty place since place is always coincident with the thing contained or bounded second a denial of any infinite place since that would presuppose an actually infinite body—to Aristotle an impossibility and third the conclusion that the whole universe itself does not have a place for outside the outermost heaven which bounds the world there can be no containing body by which the universe is bounded

Aristotle explains that by heaven he means the extreme circumference of the whole—a whole composed of all natural perceptible body The two words which Einstein uses when he discusses the possibility of a finite and yet unbounded universe seem to apply to Aristotle s conception of the world—finite in body or matter yet unbounded *i e* without anything outside itself to determine or define its boundary

Aristotle s view of the world seems to be directly opposed to that of the ancient atomists. For them the whole of matter is discontinuous, existing in indivisible units or atoms each of which is a plenum—that is, a unit of matter absolutely continuous without void in it—but between which there is void or empty space For Aristotle the material world as a whole is a plenum *i e* continuous body without void Hence if by space is meant not place but void—a bodyless interval between or within bodies—there is no space Aristotle considers the arguments of Democritus that without void local motion would be impossible but he thinks there is no necessity for there being a void if there is movement

Following Democritus Lucretius gives another reason for positing void or empty space As the indivisibility of the simple bodies or atoms consists in their absolute solidity—their lack of void—so the divisibility of composite bodies derives from their being constituted by both atoms and void Wherever space lies empty which we call the void Lucretius writes body is not there moreover wherever body has its station there is by no means empty void Therefore the first bodies are solid and free from void If there were nothing which was empty and void the whole would be solid unless there were bodies determined to fill all the places that they held the whole universe would be but empty void space

For Aristotle in contrast the divisibility of matter seems to depend upon its being continuous On his view the composite body constituted by atoms separated from one another by void is not divisible but is already actually divided whereas the very thing which Lucretius regards as indivisible because it is continuous—the voidless atom—is for Aristotle divisible To call an atom divisible is of course,

to deny that it is atomic or in the language of Lucretius an uncuttable bit of solid single ness

Thus diametrically opposite theories of space and place seem to be connected with opposite theories of matter or body Space as the empty interval or void *between* solid bodies goes along with atomism whereas place as the boundary of the containing body at which it is in contact with the contained body goes along with the theory of the world as a material plenum

The atomic theory and the plenum theory are opposed in one other fundamental respect concerning space According to Aristotle the impossibility of an actually infinite body makes the largest place finite According to Lucretius the infinite number of atoms requires an infinite space Asking whether the void that we have discovered or room or space is altogether bounded or spreads out limitless and immeasur ably deep Lucretius answers that the whole universe is bounded in no direction His argu ment seems to be like Aristotle s for an un bounded universe Since there can be nothing outside the whole sum he writes it lacks therefore bound or limit But where Aristotle s meaning seems to be that the universe has no place since all places are inside it Lucretius appears to mean that empty space extends in finitely in all directions

MODERN ATOMISTS like Newton and Locke hold a theory of space which accords with the view of matter existing in d scontinuous units separated by intervals of emptiness Newton s d stinction for example between absolute and relative space acknowledges a space that is rela tive to bodies but also affirms an absolutely independent space which has being in separa tion from matter or bodies Absolute space in its own nature without relation to anything external he writes remains always similar and immovable Relative space is some movable dimension or measure of the absolute spaces which our senses determine by its position to bod es and which is commonly taken for im movable space As for place n d stin tion from space Newton holds that it is a part of space which a body t kes up and is accord ng to the space eith r absolute or relative In oppos ng Aristotle s v ew he adds that place is not the situation nor the external surface of the body For the places of equal solids are al ways equal but their surfaces by reason of their dissimilar figures are often unequal

Locke also distinguishes between space and place the one consisting in the relation of dis tance between any two bodies or points the other in the relation of distance betwixt any thing and any two or more points which are considered as keeping the same distance one with another and so considered as at rest With this conception of place he holds in ap parent agreement with Aristotle that we can have no idea of the place of the universe though we can of all the parts of it Yet he goes on to say that what lies beyond the universe is one uniform space or expansion wherein the mind finds no variety or marks

This seems to indicate that Locke s idea of space like that of Lucretius conceives an in finite void Those who a sert the impossibility of space existing without matter must he writes make body infinite Furthermore those who dispute for or against a vacuum do thereby confess that they have distinct ideas of vacuum and plenum *i e* that they have an idea of extension void of solidity though they deny its existence or else they dispute about nothing at all For they who so much alter the significa tion of words as to call extension body and consequently make the whole essence of body to be nothing but pure extension must talk absurdly whenever they speak of va uum, since it is impossible for extension to be without ex tension for vacuum whether we affirm or deny it signifies space without body whose very existence no one can deny to be possible who will not make matter infin te and take from God a power to annihilate any particle of it

Precisely because he thinks no one can affirm an infinite body and because he conceives space to be a void distinct from bod es Locke finds it n cessary to affirm the infinity of space I would ask he says whether if God placed a man at the extremity of corporeal beings he could not stretch h s hand beyond his body If he could then he would put his arm where there was before sp ce without body Furthermore if t be imposs ble fo any particle of matter to move but nto empty space th same possi bility of a body s moving into a vo d space be-

yond the utmost bounds of body as well as into a void space interspersed amongst bodies will always remain clear and evident So that wherever the mind places itself by any thought either amongst or remote from all bodies it can in this uniform idea of space no where find any bounds any end and so must necessarily conclude it to be actually infinite

It may seem paradoxical that pure space—space existing without matter—is denied by one who also denies the existence of matter When I speak of pure or empty space Berkeley writes it is not to be supposed that the word space stands for an idea distinct from or conceivable without body or motion What is meant he suggests is merely that the resistance one body gives to another in motion is absent when space is relatively empty But this is always relative In proportion as the resistance is lesser or greater Berkeley says the space is more or less *pure* There would be absolutely pure space only if all bodies other than his own were annihilated If that too were annihilated Berkeley concludes then there could be no motion and consequently no Space

All these contradictions concerning space enter into Kant s statement of the first cosmological antinomy in which the thesis that the world is limited with regard to space and the antithesis that the world is infinite in space seem to be equally susceptible to proof—and so to disproof! Both alternatives violate our empirical concepts

If space is *infinite* and unlimited Kant writes it is *too large* for every possible empirical concept If it is *finite* and limited you have a perfect right to ask what determines that limit Empty space is not an independent correlate of things and cannot be a final condition still less an empirical condition forming part of possible experience—for how can there be experience of what is absolutely void? But in order to produce an absolute totality in an empirical synthesis it is always requisite that the unconditioned should be an empirical concept Thus it follows that a *limited world* would be *too small* for your concept

Space itself however is for Kant not an empirical concept which has been derived from external experience Rather it is a necessary representation *a priori* forming the very foundation of all external intuitions and as Kant explains in his *Prolegomena* it establishes geometry as an *a priori* science Space is nothing but the form of all phenomena of the external senses it is the subjective condition of our sensibility without which no external intuition is possible for us Nothing which is seen in space is a thing by itself nor is space a form of things supposed to belong to them by themselves The external objects which we perceive in space are nothing but representations of our senses the form of which is space

So far as the experience of space is concerned, William James seems to take an opposite view Time and space relations he says are impressed from without and *stamp copies of themselves within* To the Kantian theory that space is a *quality produced* out of the inward resources of the mind to envelope sensations which as given originally are not spatial James replies that he can find no introspective experience of mentally producing or creating space

He proposes two other alternatives either (1) there is no spatial *quality* of sensation at all and space is a mere symbol of succession or ( ) there is an *extensive quality given immediately* in certain particular sensations The second seems to James best suited to explain the development of our perceptions of space and he does not think it inconsistent with the *a priori* or non empirical character of geometry whose necessary truths refer to ideal objects, not to experienced things in physical space

The chapter on Mathematics considers the relation of the postulates of diverse geometries to the diversity of Euclidean and non Euclidean spaces such as that of the flat plane the surface of a sphere and the surface of a pseudo sphere Just as different parallel postulates select different spaces for geometrical construction so a postulate like Euclid s concerning the equality of all right angles seems to assume a uniformity of space which permits geometrical figures to be transposed without alteration. If translation through space warped or magnified forms James remarks then the relations of equality etc. would always have to be expressed with a position-qualification added.

Confronted with a variety of purely mathematical spaces the physicist is concerned with the problem of which geometry is as Einstein says in correspondence with a real object or true of the real world According to the general theory of relativity the geometrical properties of space are not independent Ein stein writes but are determined by matter It follows that our assumptions about the dis tribution of matter determine the character of the world s space

On the assumption of a world not inhabited by matter everywhere in whose infinite space the avera^e density of matter would necessa rily be *nil* Einstein says we can imagine a quasi Euclidean universe analogous to a sur face which is irregularly curved in its individual parts but which nowhere departs appreciably from a plane something like the rippled sur face of a lake But if the average density of matter differs from zero however small may be that difference then the universe can not be quasi Euclidean It would be spherical (or elliptical) if the matter were uniformly dis tributed but since in reality the detailed dis tribution of matter is not uniform Einstein concludes that the real universe will deviate in individual parts from the spherical *i e* the universe will be quasi spherical But it will be necessarily finite

The nature of the actual space of the universe thus seems to be related to the issue whether physical as opposed to mathematical space is a void or filled with matter Defining a vacuum as a space empty of all bodies known to the senses Pascal insists that there is as much difference between nothingness and space as there is between empty space and a mater al body so that empty space occup es the mean between matter and nothingness Tor ricelli s experiments seem to him complete proof against the disciples of Aristotle for they upset the belief that nature abhors a vacuum

Gilbert s observations on magnetic influ ences Newton s observat ons on the transmis sion of light and heat as well as gravitat onal pull and Faraday s on electrical phenomena all seem to adm t the possib lity of action at a dis tance or through a vacuum But the question remains whether the so called physical vacuum is an absolute void or merely empty of all bodies known to the senses

Is not the heat of the warm room conveyed through the *vacuum* Newton asks by the vibrations of a much subtiler medium than air which after the air was drawn out remained in the *vacuum*? And is not this medium the same with that medium by which light is refracted and reflected and by whose vibrations light communicates heat to bodies? And is not this medium exceedingly more rare and subtile than the air and exceedingly more elastic and active? And does it not readily pervade all bodies? And is it not (by its elastic force) ex panded through all the heavens?

Huygens also refers to an ethereal matter as the medium for the propagation of light One will see he writes that it is not the same that serves for the propagation of sound It is not the same air but another kind of matter in which light spreads since if the air is removed from the vessel the light does not cease to traverse it as before But this ethereal medi um without which bodies would act at a dis tance upon one another—gravitationally mag netically electrically—through an absolute vo d seems to have contrary properties It is not only subtiler than air but as Ne vton suggests it may be denser than quick-s lver or gold since planets and comets and all gross bod es perform their motions more freely and w th less resistance in this aethereal medium than in any fluid which fills all space adequately without leaving any pores And in still another place he asks What is there in places almost empty of matter and whence is it that the Sun and Planets gravitate towards one another without dense matter between them?

Whatever may be thou_ht of the ether as a physical hypothesis the problem still remains whether action can take place at a distance through a void or must employ what Faraday calls *physical* lines of force through filled space Faraday thinks the evidences support the latter alternative for both electricity and magnetism He quotes a letter from Ne vton to Bentley to show that Newton was an unhes tating believer in physical l nes of gravitating fo ce

In th tlett posthumously d scovered New ton says That g av ty should be innate in

herent and essential to matter so that one body may act upon another at a distance through a *vacuum* without the mediation of anything else by and through which their action and force may be conveyed from one to another is to me so great an absurdity that I believe no man who has in philosophical matters a competent faculty of thinking can ever fall into it

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the vol me and page numbe s of the passa_ges referred to For example n 4 HO IER *Il ad* BK I [265 283] 12d the number 4 is the numbe of the volume in the set the number 12d indicates that the passage is in section d of page 12

PAGE SECTIONS When the text is printed in one c lumn the lett rs a and b refer to the upper and lower halves of the page For example in 53 JAMES *Psychol gy* 116a 119b the passa e begins in the upp half of page 116 nd ends in the lo er half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the p ge the l tters c and d to the upper and lower halves of the r ght hand side of the page For example in 7 PLATO *Sympos um* 163b 164c the passage begins in the lower half of the left hand sid of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S D VISIONS One or more of the main divisions of a work (such as PART BK, CH SEC) are sometimes included in the reference l ne numbers in brackets a e given in certain ca es *e g Il d* BK II [265–283] 12d

BI LE REF RENC S Th *references are to book chapter a d erse* When the K g James a d Dou y versions differ in title of books o in the number ng of ch pters verses the King James vers on is cited first and the Douay ind cated by a (*D*) follows *e g* OLD TESTA MENT *Nehemiah* 7 45—(*D*) *II E dras* 7 46

SYMBOLS The abbreviat on esp calls the read r s attention to one or more especi lly relev nt part of a whol reference passim signifies th t the topic is d cuss d int rmittently rather tha i cont uously in th work or passage cited

For addit on l inf mati n con erning the style of the references see th Explanation of Refere ce Style f gen ral gu dance in the use of *The Gr at Ideas* consult the Preface

1 Space place and matter

1a Space or extension as th essence or property of bod s space the receptacle and becoming

7 PLATO *T ma us* 455c-458b

8 AR STOTLE *Phys c* K I CH 9 [192 9 14] 268a BK IV CH 2 [2 9b5 210 11] 288b d H 4 [21 b5 212a2] 290 291a

17 PLOTINUS *Th rd En ead* TR V CH 13 114 115b CH 19 118 119a

19 AQUINA *Summa The log a* PART I Q 66 A I R P I 343d 345c

23 HOB S *Levi th n* ART V 270d 271a

31 DES RTE *Rules* X V 29b 32 / *Dis ou se* P RT IV 52d 53a / *M d t t ons* II 78c d / *Ob j t ons a d Repl es* DEF VII 130c d 135d 136a 154a

33 PAS A *Vacuum* 370a

35 LOCKE *Hum Understa d g* K I H X II SECT II 7 150d 154d CH XV S T 4 162d 163a CH XVI S T 20 172d 173 K II CH VI SECT 5 69b-c SE T 2 273 d H X T 6 293b

4. KANT *Pi e Re s n* 28b 33d

1b Place the envelope or cont ner of bod ie place as a p t of sp ce o as relat e po tion in space

8 ARI TOTLE *Phys cs* BK IV CH 1–5 287a 292c esp CH 4 289d 291c / *Heavens* BK I 7 [75b5 12] 366d

17 PLOTINUS *F urth Ennead* TR III CH 152b / *S th Enn d* TR I CH 14 260b c

19 AQU NAS *Summa Theol gica* PART I Q 8 A 2 AN and REP 3 35 36b Q 50 A I R P 3 269b 270 Q 5 278d 280d Q 53 A ANS 280d 282 Q 66 A 4 REP 5 348d 349d

20 AQUINA *Summ Th log a* PART III U L Q 83 A 2 AN and R P 5 976 978c A 3 R 3 4 978 980d A 5 ANS 981b 982c Q 84 A 2 R P I 984c 985d

23 HO ES *Leviath n* PART I I 172b PART V 270d 271c

31 DE CAR ES *Rul s* X 23 d X II 26b c / *Med t ti n* I 78c d / *Obj ct and Repl* 228 229a

33 PA CAL *Vacu m* 375a 376

34 NEWTON *P pl s* D F T ON CHOL 9 10 11

35 LO K *Hum n U derstand g* BK CH IV

(1 *Space place and matter* 1b *Place as the en elope or container of bodies place as a part of space o as relat e posit on in space*)

SECT 2 129c d SECT 5 130d 131a CH XIII S CT 7 10 149d 150d CH XV SECT 5-8 163b 164b
35 BERKELEY *Human Knowledge* SECT 111 434c
4 KANT *Judgement* 611d 612a
53 JAMES *Psychology* 139a 140a 626b

1c The tridimens onal ty of bodies the indeterminate dimensions of pure space or prime matter

7 PLATO *Timaeus* 455c-458b
8 ARISTOTLE *Topics* BK VI CH 5 [142b20-9] 196b / *Physics* BK IV CH 1 [209 5-7] 287d / *Heavens* BK I CH 1 359a-c / *Metaphysics* BK V CH 6 [1016b25 31] 537b CH 13 [102 a7 14] 541b BK VII CH 3 [10 9 11 19] 551c d
11 NICOMACHUS *Arithmetic* BK II 832c
17 PLOTINUS *Second Ennead* TR IV 50a 57c esp CH 7-9 52a 53b CH 15 56c 57a
18 AUGUSTINE *Confessions* BK XII par 3-4 99d 100a par 15 102b-c
19 AQUINAS *Summa Theologica* PART I Q 3 A 2 CONTRARY 15c 16a Q 66 A 1 REP 1 343d 345c
20 AQUINAS *Summa Theologica* PART III SUPPL, Q 9 A 1 REP 3 951b 953b Q 80 A 5 REP 3 963a 964b Q 83 A 2 ANS 976c 978c A 3 REP 1 2 978c 980d A 5 ANS 981b 982c
23 HOBBES *Leviathan* PART IV 269d
31 DESCARTES *Rules* XIV 29b-c 31d / *Meditations* V 93b
31 SPINOZA *Ethics* PART I PROP 15 SCHOL, 360b
33 PASCAL *Vacuum* 370a
35 LOCKE *Human Understanding* BK II CH IV SECT 5 130d 131a CH XIV SECT 26 160c d CH XV SECT 1 8 162b 164b passim CH XVII 167d 174a passim
35 BERKELEY *Human Knowledge* SECT 117 436a
52 DOSTOEVSKY *Brothers Karamazov* BK V 121a b

1d The excl si eness of bodily occupation of space impenetrability

8 ARISTOTLE *Physics* BK IV CH 1 [209 5 7] 287d CH 6 [213 4 12] 293a
17 PLOTINUS *Fourth Ennead* TR II CH 1 139d
19 AQUINAS *Summa Theologica* PART I Q 8 A 2 ANS 35c 36b Q 52 A 3 REP 1 280 d
20 AQUINAS *Summa Theologica* PART III SUPPL, Q 83 A 2 4 976c 981b A 5 ANS and REP 2 981b 982c A 6 ANS and REP 2 982c 983b
23 HOBBES *Leviathan* PART I 54b-c PART IV 271b-c
28 GALILEO *Two New Sciences* FIRST DAY 153a 156d 157b
30 BACON *Novum Organum* BK II APH 36 167b APH 48 179d 180a
31 DESCARTES *Meditations* II 78c d
33 PASCAL *Pensées* 512 262a / *Vacuum* 370a

34 NEWTON *Principles* BK III RULE III 270b
35 LOCKE *Human Understanding* BK II CH IV 129b 131a CH XV SECT 11 165a b BK IV CH VII SECT 5 338b
45 FARADAY *Researches in Electricity* 854c 855a,c

2 Space void and motion

2a The role of space or place in local motion the theory of proper places absolute and relative space

7 PLATO *Timaeus* 453c 455c-458b 460c-d / *Laws* BK X 762b-c
8 ARISTOTLE *Physics* BK III CH 5 [205a10-206a8] 283b-284b BK IV CH 1 [208b1 24] 287a-c CH 2 [210a2-4] 288d CH 4 [211a4-6] 290a [212a20-28] 291c CH 5 [212b9-13] 292b CH 8 [214b13 18] 294b [215a1 10] 294c d BK VI 312b d 325d passim / *Heavens* BK I CH 2 [268b11]-CH 3 [270a13] 359d 361b CH 7 [274b30 33] 366a CH 7 [275b30]-CH 8 [277b25] 367a 369a CH 9 [278b2 279a9] 370a b BK II CH 2 376b-377c BK III CH 5 [304b11-23] 395d 396a CH 6 [305a2 28] 396c BK IV CH 1 399a d CH 3-5 401c-404d / *Metaphysics* BK V CH 13 [1020a25 33] 541c BK XI CH 10 [1067a8-33] 595c 596a / *Soul* BK I CH 3 [406a12 29] 635c d
9 ARISTOTLE *Ethics* BK X CH 4 [1174a29-b5] 428d
11 NICOMACHUS *Arithmetic* BK II 832c
12 LUCRETIUS *Nature of Things* BK I [958-1007] 13b [1052 1082] 14a-c BK II [184 250] 17b-18b
16 PTOLEMY *Almagest* BK I 10b-11b
16 COPERNICUS *Revolutions of the Heavenly Spheres* BK I 517b 518a 519b-520b
16 KEPLER *Epitome* BK IV 855b 931b-932a
17 PLOTINUS *Third Ennead* TR VII CH 8 123d 124a
19 AQUINAS *Summa Theologica* PART I Q 53 280d 284d
20 AQUINAS *Summa Theologica* PART III SUPPL, Q 84 A 2 REP 1 4-5 984c 985d A 3 ANS and REP 2 3 985d 989b
21 DANTE *Divine Comedy* PURGATORY XVIII [22 33] 80a PARADISE I [94 142] 107b d II [73-8] 111b-c XXIII [40-45] 141d
23 HOBBES *Leviathan* PART I 50 61b PART III 173a PART IV 271a b 271d
28 GILBERT *Loadstone* BK VI 110b-c
28 GALILEO *Two New Sciences* FIRST DAY 164a-c THIRD DAY FOURTH DAY 197a 260a c esp THIRD DAY 197b-d 200b-c 203a b, 205b-208c
30 BACON *Novum Organum* BK II APH 35 163 d APH 36 166b-c APH 45 176a 177c APH 48 179d 180d 181d
34 NEWTON *Principles* DEFINITIONS LAWS OF MOTION 5a 24a esp DEFINITIONS SCHOL 8b-13 BK I 11 25a 267a passim esp BK I PROP 1 7 SCHOL 32b-50a PROP 32 39 81a-88a

35 LOCKE *Human Understanding* BK II CH XI I SECT 7 10 149d 150d SECT 27 154c CH XV S CT 5-8 163b 164b
35 BERKELEY *Human Knowledge* SECT 110-117 434b-436a
42 KANT *Pure Reason* 29c d 31d 32a 55c 56a 84b-c 135d [fn 2]
51 TOLSTOY *War and Peace* BK XI 469a d

b The issue of the void or vacuum

b(1) The distinction between empty and filled space

8 ARISTOTLE *Physics* BK IV CH I [208b25 26] 287c CH 6-9 292c 297c e p CH 7 [213b30-214 16] 293b c / *Heavens* K I CH 9 [279 12-18] 370b-c BK III CH 2 [30 b32-3 2 9] 393b
12 LUCRETIUS *Nature of Things* BK I [329-369] 5b c [418 448] 6b-c [5 3-550] 7b d
17 PLOTINUS *Fourth Ennead* TR III CH 20 152c
19 AQUINAS *Summa Theologica* PART I Q 46 A I REP 4 250a 252d
20 AQUINAS *Summa Theologica* PART II SUPPL, Q 83 A 2 ANS 976c 978c
31 SPINOZA *Ethics* PART I PROP 15 SCHO 361b d
33 PASCAL *Vacuum* 359b 361a 363b 365b 370a 373b 376a
35 LOCKE *Human Understanding* BK II CH IV SE T 2-5 129c 131a CH XIII S CT 11 27 150d 154d esp SECT 21 27 152d 154d CH X V SECT 6 160c d CH XV S CT 1-4 162b 163b passim CH XVI SECT 4 168b d SECT 20 172d 173c
35 BERKELEY *Human Knowledge* SECT 116-117 435d-436a
42 KANT *Pure Reason* 71b 72a 84b 135d [fn 2] 152c d

b(2) The indispensability of void or vacuum for motion and division the absence of void in atoms

8 ARISTOTLE *Physics* BK IV CH 6 292c 293b H 7 [14 6]-CH 8 [216a26] 293d 295d / *Heavens* BK I CH 7 [275b30 276 5] 367a BK II C I [3 1b32 3 9] 393b BK IV CH 2 [3 8b29-310 13] 400b-401 / *Generation and Corruption* BK I CH 8 [325a24 b11] 423d 424b
12 LUCRETIUS *Nature of Things* BK I [329 397] 5b 6 [4 8-448] 6b c [483-550] 7a d [988-007] 13b [1 52 1082] 14a-c K VI [998-041] 93c 94a
20 AQUINAS *Summa Theologica* PART I SUPPL Q 84 A 3 REP 2 985d 989b
28 GALILEO *Two New Sciences* FIRST DAY 138b 141d 151 153a 156d 160a passim
30 BACON *Novum Organum* BK II APH 48 187c
31 SPINOZA *Ethics* PART I PROP 15 SCHOL, 361b d
33 PASCAL *Vacuum* 359a 381b / *Weight of Air* 405b-415b
34 NEWTON *Principles* K I I PRO 6 COROL III IV 281b / *Optics* BK III 541b

35 LOCKE *Human Understanding* BK II CH XIII SECT 23 153c d CH XVII S CT 4 168b d
45 LAVOISIER *Elements of Chemistry* PART I 9a b
45 FARADAY *Researches in Electricity* 850b d 855a c esp 851a b

2*b*(3) The denial of void or vacuum in favor of a plenum

7 PLATO *Timaeus* 460c d 470d-471c
8 ARISTOTLE *Physics* BK IV CH 6-9 292c 297c / *Heavens* BK I CH 9 [279 I -18] 370b c BK II C I 2 [301b32-302a9] 393b CH 6 [305 14 22] 396b-c
10 GALEN *Natural Faculties* BK II CH 6 188c 189c
12 LUCRETIUS *Nature of Things* BK I [370 383] 5c d
19 AQUINAS *Summa Theologica* ART I Q 46 A I R P 4 250a 252d Q 52 A 3 RE 2 280a d
23 HOBBES *Leviathan* P RT III 172b PART IV 269d
30 BACON *Novum Organum* BK II APH 8 140b APH 48 180a 187c
31 DESCARTES *Meditations* VI 100d
31 SPINOZA *Ethics* PART I PROP 15 SCHOL, 361b d
33 PASCAL *Vacuum* 376a b 379a 380a
35 BERKELEY *Human Knowledge* SECT 116-117 435d-436a
42 KANT *Pure Reason* 71b 72a 84b c 135d [fn 2]
45 FARADAY *Researches in Electricity* 850b d 855a c esp 854 855a c

2*c* Space as a medium of physical action the ether and action at a distance the phenomena of gravitation radiation and electricity

8 ARISTOTLE *Physics* BK VIII CH 10 [266b25-267a20] 354b d / *Heavens* K III H 2 [301b 16-3] 393a b / *Soul* BK II CH 7 [418a27]-c 8 [420a26] 649b 651c K III CH 12 [434b2 435 I] 667 668 / *Dreams* CH 2 [459 28 34] 703b
12 LUCRETIUS *Nature of Things* BK I [440 448] 6c BK VI [906-1 41] 9 b 94a
16 KEPLER *Epitome* K IV 897b 905a esp 900b 901b 906a b 922a b 934b BK V 965a b
19 AQUINAS *Summa Theologica* PART I Q 8 A REP 3 34d 35c
28 GILBERT *Loadstone* BK II 26d-40b esp 30a 32c 43 -c 45d-47b 51a-c 54d 55c K V 102d 104b BK VI 112d
28 GALILEO *Two New Sciences* THIRD DAY 202d
30 BACON *Novum Organum* K APH 36 167b c APH 37 168d 169 A I 45 176a 177c APH 48 183 -c 186a
31 DESCARTES *Rules* IX 15c
33 PASCAL *Vacuum* 366 367a
34 NEWTON *Principles* DE V-VI I 6 -8a K I RO 69 CHO 130b 131a BK I GEN RAL

(2 *Space void and motion 2c Space as a medium of physical action the ether and action-at-a-distance the phenomena of gravitation radiation and electricity*)

SCHOL, 371b-372a / *Optics* BK III 516a b 520a 522b esp 521a b 525b 529a 531b 542a passim esp 531b
34 HUYGENS *Light* CH I 553b 560b
35 BERKELEY *Human Knowledge* SECT 102 108 432d-434a passim
35 HUME *Human Understanding* SECT VII DIV 57 475d [fn 2]
36 SWIFT *Gulliver* PART III 118b 119a
42 KANT *Pure Reason* 8d [fn 2] 227b
45 LAVOISIER *Elements of Chemistry* PART I 9b c
45 FARADAY *Researches in Electricity* 441a-442b 451a-454a 463d-465d 513d 514c 521a 524a 528c 532a 604b-c 631b-c 648b d 685d 686c 816b d 819a c 819a d 824a b 832a-c 840c-842c 855a c
51 TOLSTOY *War and Peace* EPILOGUE II 687d 695c

3 Space quantity and relation

3*a* The finitude or infinity of space the continuity and divisibility of space

8 ARISTOTLE *Categories* CH 6 [5 6-23] 9b c / *Physics* BK III CH 5 [205 10-206 8] 283b 284b BK IV CH 5 [212b11 21] 292a / *Heaven* BK I CH 9 [279 12 b4] 370b d / *Metaphysics* BK V CH 13 [1020 25 33] 541c BK XI CH 10 [1067 8-33] 595c 596a
11 ARCHIMEDES *Sand Reckoner* 520a 526b passim
12 LUCRETIUS *Nature of Things* BK I [951 1 07] 12d 13b BK II [89-94] 16a b [1048 1063] 28b-c BK VI [647-652] 89a
16 PTOLEMY *Almagest* BK I 10b
16 COPERNICUS *Revolutions of the Heavenly Spheres* BK I 516a 517b
16 KEPLER *Epitome* BK IV 882a 886b
18 AUGUSTINE *City of God* BK XI CH 5 324d 325c
19 AQUINAS *Summa Theologica* PART I Q 8 A 4 REP 3 37c 38c Q 46 A I REP 8 250a 252d Q 52 A I 278d 279b Q 53 A I ANS and REP I 280d 282a A 2 ANS and REP I 282 283b
20 AQUINAS *Summa Theologica* PART II SUPPL, Q 84 A 3 CONTRARY 985d 989b
23 HOBBES *Leviathan* PART I 54b-c 61b PART II 162b PART IV 271b
30 BACON *Novum Organum* BK I APH 48 110d 111a
31 DESCARTES *Objections and Replies* 112b
33 PASCAL *Pensées* 121 195a 205 2 6 211a / *Geometrical Demonstration* 434b 439b
34 NEWTON *Principles* DEFINITIONS SCHOL, 8b-11a / *Optics* BK III 543a
35 LOCKE *Human Understanding* BK II CH XIII SECT 4 149b SECT 21 152d 153b CH XIV SECT 26 160c d CH XV SECT 1-8 162b-164b passim CH XVI SECT 8 167c CH XVII 16 d 174a passim esp SECT 3 4 168b d SECT 11 170c
35 BERKELEY *Human Knowledge* SECT 117 436a
42 KANT *Pure Reason* 24c d 28b-29c 135a 137a c 152a d 160b 163a esp 162b / *Judgement* 501a b
51 TOLSTOY *War and Peace* EPILOGUE II 693c 694a passim
53 JAMES *Psychology* 631a
54 FREUD *General Introduction* 562c d

3*b* The relation of physical and mathematical space sensible and ideal space

8 ARISTOTLE *Physics* BK IV CH I [209] 287d CH 8 [216b2 11] 296a b / *Metaphysics*, BK XIV CH 5 [1092 18 21] 625a
20 AQUINAS *Summa Theologica* PART III SUPPL, Q 83 A 2 ANS 976c 978c A 3 REP I 2 9 & 980d
31 DESCARTES *Rules* XIV 28a 33b / *Discourse* PART IV 52d 53a / *Objections and Replies* 169c 170a
33 PASCAL *Vacuum* 370a 373a 374a
34 NEWTON *Principles* DEFINITIONS SCHOL 8b-13a esp 8b 9a 12a b
35 LOCKE *Human Understanding* BK II CH IV SECT 5 130d 131a CH XIV SECT 26 160c d CH XV SECT 1-8 162b-164b passim
35 BERKELEY *Human Knowledge* SECT 110-117 434b-436a SECT 124 128 437d-438d
42 KANT *Pure Reason* 24a 26b 161d 163a / *Judgement* 574b-575a
53 JAMES *Psychology* 877b

3*c* Geometrical space its kinds and properties spatial relationships and configurations

8 ARISTOTLE *Categories* CH 6 [5 1 23] 9b c / *Heavens* BK I CH I 359a-c / *Metaphysics* BK V CH 6 [1016b25 31] 537b
11 EUCLID *Elements* BK I DEFINITIONS 1 15 1a 1 4 1b POSTULATES esp 5 2a COMMON NOTIONS 4 2a PROP 4 4a b PROP 8 6b 7a PROP 16 10b 11a PROP 26 16a 17b PROP 32 18b 19a BK X PROP I 191b-192a BK XI DEFINITION 1 301a
11 ARCHIMEDES *Sphere and Cylinder* BK I ASSUMPTIONS esp 5 404b / *Spirals* 484b / *Quadrature of the Parabola* 527b
11 NICOMACHUS *Arithmetic* BK II 832b-d
16 KEPLER *Epitome* BK IV 865a b
17 PLOTINUS *Sixth Ennead* TR III CH 13 14 28 d 289a
19 AQUINAS *Summa Theologica* PART I Q 85 A 8 REP 2 460b-461b
31 DESCARTES *Rules* XIV 28a-33b esp 30d 3 / *Discourse* PART IV 52d 53a / *Meditations* V 93 d VI 96b-d / *Objections and Replies* 217a-c 228c 229a

15 LOCKE *Human Understand ng* BK II CH XIII SECT 5-6 149b d
15 BERK BY *Huma Knowledg* SECT 123 132 437 -439
15 HU E *H man U dersta ding* SECT XII DIV 124 125 506a 507 passim
12 KANT *P e Reason* 24a 26b
DOSTOEVSKY *Brothers Ka ama ov* BK V 121a b
53 J ES *Ps h logy* 550b 551b [fn I] 876b-878a esp 877b

' The me sur ment of sp c s d stances and size trigonometry the use of parallax

16 PTOLEMY *Almagest* BK V 165a 176a BK IX 270a b
16 COPE NI US *Revolutions of the Heavenly Spheres* BK I 516a b 521b 529a BK IV 705a 714b
16 KEPLER *Epitome* BK IV 861a 863b 868b 887a / *Harmo s of the World* 1016b 1018a
30 B CON *N um Org num* BK I APH 09 129b BK II A H 39 170b-c APH 45 170a 177c
31 DE CARTE *Ru les* XIV 31b-33b
34 NEWTON *Principles* BK III L MMA 4 333a 337b
41 G B ON *Decl n and Fall* 299b c
53 JAMES *Psych logy* 551a b 673b

The knowl dg of space nd figures

a Space as the di ne sensorium and space a transcendent l form of intu tion the *a pri ri* foundation of geometry

34 NE VTON *Pri ciples* K III G NERAL CHOL, 370 371a / *Opt cs* K III 529a 542a 543a
42 K N *Pi r Rea on* 16a-c 17d 18d 23a 26b 31b d 46 55c 56a 62 d 68a 69 86b-c 87b 94b 95a 99a 101b 110a 131a-c 135d [fn 2] 136c 137c [antith s] 153 155 186d 187 211 218d esp 211 212a 213d 215a / *Pract al Reason* 307d 308b 312c 313d / *J dgement* 471b-c 551 553 574b 575a
53 J MES *Ps /ol gy* 629a 631a 874 876b-878a

b The contro ersy conce ning inn te nd cquired sp c perc ption

42 KANT *Pure Reas* 23a 24a 25 26a 31d 32c / *Practic l Rea n* 307d 308b
53 J MES *P h logy* 474 -475 627 635 esp 628b 631 633a 635a 852b 853a 860b 861

c The percept on of sp ce diffe ences be twe n sual ud tory nd t ctual sp c pe specti e and sp ti l llu on

8 ARIS OTL *Sen e and the Sen ble* CH 6 [445b4 18] 683b d / *Mem ry d Rem cen e* CH [452b7 8] 694b-c
12 LU R TIU *Nat r f Things* K [3 8 33] 19a b BK IV [30- 55] 47b-c [69- 91] 47d 48a [353 452] 48d 50a

17 PLOTINU *Second En ead* TR VIII 64c 65c
35 LOCKE *Human Underst nding* BK II CH XIII SECT 2 149a S CT 5 149b c
35 BERKEL Y *Human Knowl dge* SECT 42-44 420c-421a
53 J MES *P ychol gy* 318b 400a 406b 410a b 471b-479a esp 474a-477b 540a-635a esp 541a 548b 552a 560a 575a 627a-635a

5 The mode of exi tence of geometric l ob jects the r character as abstractions the r relation to intelligible matter

7 PLATO *Republ c* BK VI 387b-c BK VII 394b c / *Phileb s* 636b-c / *Seventh Letter* 809c 810b
8 AR TOTL *Po ter of Analytics* BK I CH 13 [79 6- 0] 108c CH 18 [81 40-b5] 111b c / *T p s* BK VI CH 6 [143b11-33] 197b-c / *Physics* BK II CH [93b23-194 11] 270a-c BK II CH 5 [04 7 19] 282a b BK IV CH I [208b 9-24] 287b-c / *H ens* BK I CH I [299 1-17] 390b c / *Metaphysics* K I CH 6 [987b 4-19] 505d CH 8 [989b29-33] 508 CH 9 [991b9-992b18] 509d 511a BK III I [995b13 18] 514a [996 13- 5] 514c CH 2 [997b12-998 9] 516b d CH 5 [1001b26]-CH 6 [1002b25] 520c 521 BK V I CH 2 [1028 18- 8] 551a b CH 10 [1 35b3 1036 I] 559b-c I I [1036b32-1037a4] 560b BK XI H 2 [1060 36 b19] 588 d CH 3 [06 a29-b4] 589 BK X I CH I [1069 30-37] 598b BK XIII CH 1-3 607a-610a CH 6 [08 b23-30] 612c CH 9 616d 618c BK XIV CH 3 622d 623d passim CH 5 [1092 18 2] 625a CH 6 [93b24-29] 626d / *Soul* BK III CH 7 [431b 3 19] 664b
0 AR STOTL *Mot o of An m l* CH I [698a24-] 233b / *Eth s* BK VI CH 8 [1142 16- 9] 391b
11 N CO I CHU *Ar thmetic* BK I 811a 812a
18 AUGUST N *Conf ssio s* K X par 9 76 b
19 AQUIN S *Summ Theol ica* PART I Q 5 A 3 R P 4 25 d Q I A 3 R P 2 49a-c Q 44 A R 3 238b 239a Q 85 A I R P 451 453
20 AQUINA *Summa Theol gica* ART I SUP L Q 83 A A S 976c 978 A 3 REP 2 978c 980d
31 D CARTES *Rules* X V 28a 33b esp 30d 32a / *D scour e* PART IV 52d 53a / *Med tat s* I 76b-c V 93 d V VI 96a d / *Obj ti ns and Replies* 169 170a 217a d 218c 228c 229a
35 LOCKE *Hum n U der ta di g* K II H X S CT 5-6 149b d K I CH II ECT 9 259c 260 K V CH IV S CT 5-8 324d 325c
35 B RKEL Y *Hum n K ouledg* INTRO CT 12 6 408 -409d SE T 12 6 415b-416a S T 3 8 437 -438d esp CT 5- 6 438a-c
35 HU E *H m U der t nd ng* CT V D V 2 458 b S T X D V 505 d D V 4 5 506 507a esp D V 5 507b [fn 1]
42 KA *Pu Rea* 16 -c 17d 18d 24d 25b 31b-d 35b 36 46 -c 55 62 d 68a 69 86b-c 87b-c 91 d 94b 95 211c 213

(5 *The mode of ex st nce of geometrical bjects the r charact r as abstract ons their r la t on to intell g ble matter*)

217c d / *Practical Reason* 312c d / *J dgement* 551a 552c

53 JAMES *P y holog* 876b 878a 880b 881a

6 The spir tual significance of place position and space

7 PLATO *T mae s* 455b c

8 ARISTOTLE *Heavens* BK I CH 3 [2 0b1 12] 361c d BK II CH 1 375b d 376a CH 13 [293 15 b15] 384d 385a

16 COPERNICUS *Revol t ons of the H avenly Sphere* BK I 520b 526a 528a

16 KEPLER *Ep tome* BK IV 853b 854a 857b 860b 915b 916a / *Harmonie of the Wo ld* 1080b 1085b

18 AUGU T NE *Conf ss ns* BK VII par 20 21 49d 50a

19 AQUINAS *Summa Theologica* PART I Q 3 A 1 REP 5 14b 15b Q 8 A 1 REP 3 34d 35c Q 61 A 4 316d 317c Q 66 A 3 347b 348d Q 102 523d 527a c

20 AQUINAS *Summa Theolog ca* PART III SUPPL Q 84 A 2 REP 5 984c 985d

21 DANTE *Di ine Comedy* HELL V [1 15] 7a VI [77 87] 9a b IX [16–33] 12b c PURG TORY IV [1–96] 57c 58c XVIII [22 33] 80a b XX [124]–XXI [72] 84c 85d PARADISE I [64 1] 106d 107d III [34–90] 109d 110b IV [28 48] 111a XXVIII 148d 150b XXX XXXII 151d 156a

32 MILTON *Paradise Lost* BK II [850–1009] 9b 133a BK III [523 539] 146b 147a BK VIII [114 130] 234b 235a

33 PASCAL *Pensé s* 194 207b 205 206 211a

42 KANT *Practical Reason* 360d 361d

46 HEGEL *Philosophy of History* INTRO 186c d

54 FREUD *General Introduction* 562c d

CROSS REFERENCFS

For Other discussions of the theory of the receptacle *see* FORM 1d(1) MATTER 1 WORLD 4b

Other discussions of extension as a property of bodies *see* BEING 7b(4) FORM 2d MATTER 2a

Other discussions of the doctrine of prime matter *see* BEING 7c(3) CHANGE 2 FORM 2c(3) INFINITY 4c MATTER 1a

The role of space or place in local motion *ee* CHANGE 7a RELATION 6a

Discussions bearing on the measurement of space *see* MATHEMATICS 5a MECHANICS 3a QUANTITY 6b–6c

Matters relevant to space as a transcendental form of intuition and to the related problem of the foundations of geometry *see* FORM 1c MATHEMATICS 1c MEMORY AND IMAGINATION 6c(2) MIND 1e(1) 4d(3) TIME 6c and for other discussions bearing on space perception *see* QUALITY 2b SENSE 3c(3)

The problem of the mode of being which is possessed by the objects of geometry *see* BEING 7d(3) IDEA 2g MATHEMATICS 2a–2b MATTER 1c

The issue concerning a void or vacuum and for the related problem of action at-a-d stance *see* ASTRONOMY 3b CHANGE 7a ELEMENT 5c MECHANICS 5d 6d(2)

Other con iderations of the nfinity or continuity of space *see* INFINITY 3d MATHEMATICS 2c ONE AND MANY 3a(4) QUANTITY 2 5a and for discussions of astronomical space and the size of the universe *see* ASTRONOMY 5 9c WORLD 6a 7

The analy is of geometrical space spatial relat onships and configurations *see* QUALITY 3b QUANTITY 3 3e(2)

The relat on of sp ritual being or action to place or space *see* ANGEL 3f ASTRONOMY 6 GOD 5g IMMORTALITY 5g SOUL 3e 4d(3)

ADDITIONAL READINGS

Listed bel w are works not included in *G e t Books of the W estern W o ld* but relevant to the idea a d topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collection
II Works by authors not repre ented in this collection

For the d te place, and oth r facts concern ng the publication of the works cited consult the B bl raphy of Add tional Readi gs which follows the last chapter of *The Great Ideas*

I

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H BBES *Co cerning B dy* P T II CH 7
HUME *A T at se of Human Natu* BK I PART II
B RKEL Y *A Essay Towards a N w Theory of Visio*
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—— *Met phys al F u dat o f N tural Science*
W JAMES *Collect d Essays and Reviews* XXI

II

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S R *D p it tiones M t physicae* XXX (7) XXXIX X ( ) LI–LIII
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—— *Corre po dence w th Cl k*
D ALEMBERT *Traité de dy am que*
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J W YOU G *Lectures on Fundamental Concepts of Alg bra a d G ometry* L CT XVI–XV I
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Chapter 90 STATE

INTRODUCTION

IS man gregarious in the same sense as other animals are? Is he unlike other social animals the only political animal? Does man pattern the state after his own nature or does he in imitation of the angels try to live up to a city in the skies —a model of rationality or a utopian illusion? According to the way such questions are answered different theories of the state develop in the tradition of western thought

But it is not only the view man takes of his social nature which affects his view of society or the state His conception of the state is also colored by his understanding of man s place in nature and by his understanding of man s relation to God On one view the state is ordered to the service of man on another man is thought to be a creature of the state and the state is made God on still another man—like Antigone in Sophocles play—seems to be torn between serving the state and serving God

If man admits anything to be his superior he acknowledges his inferiority only to God or to the state That the idea of God and the idea of the state compete for maximum attention in the tradition of western thought is a significant and readily intelligible fact That the word sovereign which connotes *absolute supremacy* has both political and religious significance throws further light on this rivalry It immediately suggests all the issues of church and state of the spiritual and the temporal power of the city of God and the city of man

Even without the aura of divinity the state in the conception of many writers assumes by comparison with the individual man the proportions of the greatest living thing on earth For Plato it is the counterpart of the human soul many times magnified For Aristotle it is like an organic whole to which the individual belongs just as his own arm or leg belongs to him as an organic part For Hobbes it is the body politic—that Leviathan which dwarfs its members For Rousseau it is the corporate person having a general will more perfect than the individual will—infallible or almost infallible When to these images of the state is added the highest transfiguration—that by which the state becomes according to Hegel the image of God on earth or the embodiment of Absolute Spirit—the greatness of the state cannot be magnified further

THE PASSAGES IN WHICH these conceptions first appear are among the most famous in the literature of the theory of the state In the *Republic* Socrates proposes that we inquire into the nature of justice and injustice first as they appear in the State and secondly in the individual proceeding from the greater to the lesser and comparing them After the structure of the state has been examined in terms of its constituent classes and their functions or relations to one another Socrates returns to the individual We may assume he says that he has the same three principles in his own soul which are found in the state and in an other place he adds that there appear to be as many forms of the soul as there are distinct forms of the State

Whereas Plato analogizes the social classes in the state with the parts of the soul Aristotle compares the state in relation to the individual with the body in relation to its members The state is by nature clearly prior to the family and to the individual Aristotle writes since the whole is of necessity prior to the part for example if the whole body be destroyed there will be no foot or hand except in an equivocal sense The proof that the state is a creation of nature and prior to the individual is that the individual when isolated is not self-sufficing

and therefore he is like a part in relation to the whole

The analogical conception of the state takes a different turn with Hobbes The state is a work of art not a creation of nature Nature (the Art whereby God hath made and governs the world) says Hobbes is by the Art of man as in many other things so in this also imitated that it can make an Artificial Animal The machines men make— engines that move them selves by springs and wheels as doth a watch — seem to Hobbes to have an artificial life But Art goes yet further imitating that Rational and most excellent work of Nature Man For by Art is created that great Leviathan called a Commonwealth or State (in Latin *Civitas*) which is but an Artificial Man though of greater stature and strength than the Natural for whose protection and defense it was in tended and in which the Sovereignty is an Artificial Soul as giving life and motion to the whole body

Hobbes also speaks of the multitude being united in one Person as the generation of that great Leviathan or rather (to speak more reverently) of that Mortal God to which we owe under the Immortal God our peace and defence It is both divine and human for that which is compounded of the powers of most men united by consent in one person natural or civil is according to Hobbes the greatest of human powers

Rousseau has a number of different names for the moral and collective body formed by the association of individuals This public per son he says formerly took the name *city* and now takes that of *Republic* or *body politic* it is called by its members *State* when passive *Sovere gn* when active and *Power* when com pared with others like itself But Rousseau s primary emphasis *seems to be upon the per* sonality of the State it is a corporate person with moral qualities and intellectual faculties He refers repeatedly to the State as a *persona ficta* and as a moral person whose life is in the union of its members

Many of these comparisons or analogie recur in Hegel s theory of the state But for Hegel they are no longer metaphors they are the elements of a literal definition The state is an organism says Hegel It is th organic whole no part of which can have a separate life As occurs with life in the physical organism he writes life is present in every cell and separated from that life every cell dies This is the same as the ideality of every single class power and Corporation as soon as they have the impulse to subsist and be independent It is with them as with the belly in the organism It too asserts its independence but at the same time its independence is set aside and it is sac rificed and absorbed into the whole

But the state is not merely a living organism To the mature state says Hegel thought and consciousness essentially belong As high as mind stands above nature so high does the state stand above physical life Man must there fore venerate the state as the divine on earth and observe that if it is difficult to comprehend nature it is infinitely harder to understand the state In saying this Hegel seems to go beyond analogy to the assertion of a definition The march of God in the world that is what the state is he declares The basis of the state is the power of the reason actualizing itself as will In considering the Idea of the state we must not have our eyes on particular states or on particular institutions Instead we must con s der the Idea this actual God by itself

To those who object that the state is finite Hegel replies that to hold that mind on earth *i e* the state is only a finite mind is a one-sided view since there is nothing irrational about actuality Of course a bad state is world ly and finite and nothing else But the rational state is inherently infinite As simply stated by Hegel in the Introduction to his *Philosophy of History* the State is the D vine idea as it exists on Earth

THE DIVERSE CONCEPTIONS of the state raise *major issues in political theory concern ng the* origin of the state and the end it serves in both of which is involved the problem of the individual s relation to the state That problem is touched on in the chapter on CITIZEN and wherever the problem of the common good or the general welfare is discussed Here the ques tion whether the state is made for man or man for the state whether the state subor dinates the ind v dual in every phase of hi life or only in those matters wh

takes precedence over private interests serves critically to test the practical significance of different theories of the state Here also questions concerning the relation of the family to the state—discussed from the point of view of the domestic community in the chapter on FAMILY—throw light on the nature and origin of the political community

The word community and its synonym society seem to be more inclusive in meaning than state The family and the state are both communities—associations of individuals for a common purpose and sharing in a common life The word state is customarily used only for the developed political society—whether a city-state a feudal state or a nation state the word society usually covers the tribal community the village or any community which is politically primitive and has some of the characteristics of a large family In addition there are within the state at least in its modern formation many organized groups which deserve the name society —economic corporations and other associations religious educational professional recreational and more comprehensive than any particular political community are the cities of God and man which in Augustine s conception of them are not to be identified with either the Church or the State

With the rise of the science of sociology in our time the idea of society has come to be regarded as more general than that of state But in the tradition of the great books particularly those of political theory the state seems to be considered the epitome of human society All other forms of association are for the most part discussed only in their relation to the state either as the antecedents from which the state develops or as the subord nate organizations which it includes or sometimes as in the case of the church a distinct but coordinate community

The nature of society in general and the problem of different types of social organization and development are not treated in the great books except in their bearing on the family the church or the state—the three communities which seem to be taken as representative or basic Hence there is no chapter on society or community as such What for modern sociology is a unified subject matter here divides into a number of related yet distinct ideas—the domestic community being treated in the chapter on FAMILY the religious community in the chapter on RELIGION the various forms of economic organization in the chapters on LABOR and WEALTH In this chapter therefore we shall confine our attention to the specifically political community both in itself and in relation to these other communities or social groups.

CONCEIVED IN POLITICAL terms the problems of the state would seem to be inseparable from the problems of government Yet the ideas of state and government may be separated to the extent that one signifies the political community as a whole and the other the organization of its members according to relationships of ruler and ruled Furthermore the state may in one sense remain the same while in another it changes with changes in its form of government

Some writers like Aristotle and Hegel tend to identify state and government Aristotle for example says that the sameness of the state consists chiefly in the sameness of its constitution Others like Locke and Rousseau seem to regard government as part of the state the chief institution of a civil society or political community but definitely a means for securing the ends for which the state is formed For Locke government is primarily the legislative power for Rousseau it is the supreme administration th legitimate exercise of the executive power but for both it is a representative body—an organ of the whole body politic

Insofar as the great political theorists distinguish problems of the external relation of states with one another from those which concern the internal organization of the state *and the relation of the state to its own members* they also tend to distinguish state from government Hegel s distinction between external and internal sovereignty for example conceives the whole community as a sovereign state in relation to other communities and the state as a sovereign government in relation to its own members

Such questions of sovereignty or more generally of the relation of states to one anoth r belong to this chapter as well as to the chapter

on WAR AND PEACE but the theory of government is for the most part treated elsewhere—in the chapters on GOVERNMENT and CONSTITUTION and in all the chapters dealing with the special forms of government Still other problems of government which have a bearing on the nature of the state its powers and its limits are dealt with in the chapters on JUSTICE and LAW

THAT IT IS SOMEHOW natural for men to associate politically is generally affirmed even by those who also think the state is artificial or conventional No one takes either of the possible extreme positions that the state as a purely voluntary association is without any basis at all in man s nature and needs or that the state like the bee hive and the ant mound is purely a production of instinct

Saying that man is by nature a political animal Aristotle goes on to remark that man is more of a political animal than bees or other gregarious animals But the difference Aristotle points out between man and other social animals may make man the *only* political animal It consists in the fact that man being the only animal endo ved with the gift of speech can communicate with his fellows concerning the exped ent and inexpedient and therefore likewise the just and the unjust What characterizes human associations according to Aristotle is that they are built upon a shared sense of the expedient and the just Justice he writes is the bond of men in states

Hobbes also distinguishes between human and animal societies but seems to interpret the distinction differently Bees and ants live sociably one with another he says and yet have no other direction than their particular judgments and appetites nor speech whereby one of them can signify to another what he thinks expedient for the common benefit Inquiring why mankind cannot do the same —that is live sociably without government and law—Hobbes offers a number of explanations of which the last is that the agreement of these creatures is natural that of men is by covenant only wh ch is artificial and therefore it is no wonder if there be somewhat else required (besides covenant) to make their agreement constant and la ting wh ch is common power to keep them in awe and to direct their actions to the common benefit

But though Hobbes calls the state artificial because he holds it to be the product of a contract he does not deny the natural necessity which drives men to the creation of a commonwealth Man quits the state of nature which is a war of every man against every man to achieve self preservation or at least to enjoy the security of civil peace and the freedom from fear of violence

As natural as it may be for men to be in that condition which is called war when they live without a common power to keep them all in awe it is equally natural according to Hobbes for men to seek peace The passions that incline men to peace are fear of death desire of such things as are necessary to commodious living and a hope by their industry to obtain them And reason suggesteth convenient articles of peace upon which men may be drawn to agreement The commonwealth is therefore natural to the extent that man s needs and passions require it and man s reason recognizes certain natural laws for constructing it

The state is naturally necessary not as the effect of instinctive determinations but as the rationally determined means to an end If the end the state serves were not naturally sought or if there were any other means which reason could devise for accomplishing that end the state would be purely conventional—and dispensable The final cause end or design of men in the introduction of that restraint upon themselves (in which we see them live in commonwealths) is according to Hobbes the sight of their own preservation and of a more contented life thereby

In this ma n particular Ar stotle s account of the origin of the state seems to be the same. Though he does not attribute its formation to a contract and does not make fear the predominant motive he does regard the state as natural *only because* of its ind spensabil ty as a means for achieving the ends men naturally seek. The family is natural Ar stotle suggests because it is necessary for the perpetuation of the race and for the supply of men ev ryday wants When men aim at something more than the supply of d ily n eds the first society

to be formed is the village —normally an association of families And when several villages are united in a single complete community large enough to be nearly or quite self sufficing the state comes into existence originating in the bare needs of life and continuing in existence for the sake of a good life Therefore if the earlier forms of society are natural so is the state

The implication seems to be that if men were not naturally impelled to seek a better life than the family or the tribal community can provide —in other words if the family or village satisfied all of man s natural needs for ociety—the larger community the state would be neither natural nor necessary That man is by nature a political animal does not therefore mean that men have always and everywhere lived in states

Aristotle refers to the man who lives apart from society describing the natural outcast— the tribeless lawless heartless one whom Homer denounces —as a lover of war He conceives the state as coming into being subsequent to more primitive forms of social life each type of community being successively established with a view to some good for mankind always act in order to obtain that which they think good Since he thinks that the state aims at good in a greater degree than any other and at the highest good he praises the man who first founded the state as the greatest of benefactors

For Aristotle then there seems to be no inconsistency in saying that the state is as natural as the family and also that it is the result of a convention *i e* a voluntary association of men Nor does there seem to be any inconsistency between Hobbes view that the state is produced by a covenant of every man with every man and his understanding of the naturalness of the state in terms of the impulses which lead men to enter into this contract The same double note appears in the account of the state s origin which Locke Rousseau and Kant give The issue raised by the contract theory thus seems to turn on the interpretation of the original convention—whether or not it has legal s gnificance and what obl gat ons or limitations it imposes

Where Hobbes for example interprets the contract as creating along with the common wealth a sovereign person having absolute power Locke seems to make majority rule the legal consequence of the original compact God designed man for a sociable creature according to Locke with an inclination and under a necessity to have fellowship with those of his own kind Yet even what he calls the first society between man and wife Locke says, is made by a voluntary compact It makes no difference to Locke s theory whether political societies develop by expansion from the family (which he takes to be the normal course of events) or result from a voluntary association of independent men

In either case political as distinguished from domestic society does not begin until every man by consenting with others to make one body politic under one government puts himself under an obligation to every one of that society to submit to the determination of the majority This is done by barely agreein to unite into one political society which is all the compact that is or needs be between the individuals that enter into or make up a commonwealth And thus that which begins and actually constitutes any political society is nothing but the consent of any number of free men capable of a majority to unite and incorporate into such a society

If it is that and that only which did or could give beginning to any lawful government in the world it seems to be equally evident to Locke that absolute monarchy which by some men is counted the only government in the world is indeed inconsistent with civil society and so can be no form of civil government at all

Though Rousseau says that the most ancient of all societies the family is the only one that is natural he qualifies this by adding that it remains natural only so long as the children need the family for their preservation If the members of the family remain united thereafter they continue so no longer naturally but voluntarily and the family itself is then maintained only by convention By the same criterion civil society would seem to be natural at least on Rousseau s own supposition that the obstacles in the way of their preservation in the state of nature are greater than the power of isolated individuals or families to maintain

themselves, and so the human race would perish unless it changed its manner of existence

Rousseau furthermore explicitly denies that the transition from a state of nature to a state of civil society can be treated as an historical fact It is an hypothesis calculated to explain the nature of things [rather] than to ascertain their actual origin The social contract which Rousseau sometimes calls the first conven tion is, therefore the legal not the historical origin of the state As he formulates the com pact each of us puts his person and all his power in common under the supreme direction of the general will and in our corporate capac ity we receive each member as an indivisible part of the whole

Though all the qualities of the general will may reside in the majority so that the general will can be discovered by a majority vote unanimity is required to create the sover eign body politic with the right as well as the power to compel whoever refuses to obey the general will Rousseau points out that the law of majority voting is it elf something estab lished by convention and presupposes unanim ity on one occasion at least To this extent Rousseau agrees with Locke about the juridical significance of the original convention or the universal consent which establishes a civil soci ety and just as Locke calls absolute monarchy inconsistent with the very nature of the state so Rousseau uses the words republic and body politic interchangeably To be legiti mate he writes the government must be not one with the sovereign but its minister

But Rousseau identifies government with the executive rather than primarily with the legis lative as Locke does He therefore denies that the original convention institutes government as well as the body politic itself— the Sover e gn having no force other than the l gislative po ver In consequence Rousseau and Locke differ somewhat in their discussion of the dis solution of government as distingu shed from the dissolution of society or the death of the body politic. Rousseau regards no la as irrev ocable not excluding the social compact it self for if all the citizens assembled of one ac cord to break the compact it is impo s ble to doubt that it would be very legitimately broken

According to Kant a state is the union of a number of men under juridical laws —the op posite of the state of nature in which there is no distributive justice It is incumbent on men says Kant to accept the principle that it is necessary to leave the state of nature in which every one follows his own inclinations and to form a union of all those who cannot avoid coming into reciprocal communication and thus subject themselves in common to the external restraint of public compulsory laws

Kant refers to this principle as the postu late of public right which obliges all men to enter into the relations of a civil state of soci ety The state thus seems to be both necessary and voluntary for though he says that the act by which a people is represented as consti tuting itself into a state is termed *the original contract* yet he also adds that this is properly only an outward mode of representing the idea by which the rightfulness of the process of or ganizing the constitution may be made con ceivable

AGAINST ALL THESE notions of the original con tract Hegel criticizing Kant s treatment of marriage under the concept of contract says that it is equally far from the truth to ground the nature of the state on the contractual rela tion whether the state is supposed to be a con tract of all with all or of all with the monarch and the government Contract according to Hegel belongs to the sphere of relationships concerning private property generally Hence the intrusion of this contractual relation into the relation between the individual and the state has been productive of the greatest confusion in both constitutional law and public life

A contract Hegel explains springs from a person s arbitrary will an origin which marriage too has in common with contract But the case is quite different with the state it does not lie with an individual s arbitrary will to separate himself from the state because we are already citizens of the state by birth The rational end of man is life in the state and if there is no state there reason at once demands that one be founded Permission to enter a state or leave it must be g ven by the state this then is not [illegible] an individual s ar

bitrary will and therefore the state does not rest on contract for contract presupposes arbitrariness It is false to maintain that the foundation of the state is something at the option of all its members It is nearer the truth to say that it is absolutely necessary for every individual to be a citizen

Hegel dismisses all questions concerning historical origins in general or particular as no concern of the Idea of the state In the Idea itself its antecedents are to be found The family and civil society are the earlier—logical —moments in the development of the Idea of the State Civil society Hegel writes is the [state of] difference which intervenes between the family and the state even if its formation follows later in time than that of the state The social contract theory applies only to what he calls civil society by which he means the modern conception of the state as a unity which is only a partnership Many modern constitutional lawyers Hegel goes on have been able to bring within their purview no theory of the state but this In civil society each member is his own end and except by contract with others he cannot attain the whole compass of his ends and therefore these others are means to the end of the particular members

In another place Hegel describes civil society as a system of complete interdependence for the attainment of selfish ends wherein the livelihood happiness and legal status of one man is interwoven with the livelihood happiness and rights of all In still another he observes that only when the state is confused with civil society only when its specific end is laid down as the security and protection of property and personal freedom does the interest of the individuals as such become the ultimate end of their association Whence it follows that membership in the state is something optional But the state s relation to the individual is quite different from this Since the state is mind objectified it is only as one of its members that the individual himself has objectivity genuine individuality and an ethical life

The unity of the state unlike that of civil society is according to Hegel an absolute unmoved end in itself in which freedom comes into its supreme right This final end has supreme right against the individual whose supreme duty is to be a member of the state

It does not seem to be an inevitable corollary of the social contract theory that the stat be conceived as serving the private interests of individuals The welfare of the state Kant declares is its own highest good It is not to be understood merely as the individual *well being* and *happiness* of the citizens of the state for—as Rousseau asserts—this end may perhaps be more agreeably and more desirably attained in the state of nature Kant and Locke both affirm a social contract but where Kant makes the safety of the republic itself the highest law (*salus reipublicae suprema lex*) Locke makes it the security of the people (*salus populi*)

The reason why men enter into society is the preservation of their property writes Locke The property of the individual is insecure in a state of nature to avoid this insecurity men unite into societies that they may have the united strength of the whole society to secure and defend their properties When Locke says that the chief end of civil society is the preservation of property he does not refer solely to economic goods but to all the goods to which he thinks man has a natural right— his life liberty and estate Men would not quit the state of nature he writes, were it not to preserve their lives liberties and fortunes and by stated rules of right and property to secure their peace and quiet

In the light of Locke s conception of property his position resembles Hobbes statement of the end which men seek in forming a commonwealth to live peaceably amongst themselves and be protected against other men and to get themselves out from that miserable condition of war in which life is solitary poor nasty brutish and short

It seems to be in a different sense of property that Rousseau holds that the foundation of the social compact is property and its first condition that everyone should be maintained in the peaceful possession of what belongs to him Restricting property to economic possessions Rousseau asks Are not all the advantages of society for the rich and powerful? Society he observes provides a powerful protection for the immense possessions of the rich

and hardly leaves the poor man in quiet possession of the cottage he builds with his own hands.

This and Adam Smith s statement that civil government so far as it is instituted for the security of property is in reality instituted for the defence of the rich against the poor or of those who have some property against those who have none at all seem to anticipate the Marxist view of the state as the bulwark of property rights and an instrument of class oppression If the protection of property and the maintenance of economic inequalities is the sole purpose of the state then the ultimate resolution of the class war in favor of a classless society will in the opinion of Marx and Engels be accompanied by what they call the withering away of the state —an atrophy from loss of function

But even in a classless society the state would not cease to function if its end were to secure not merely the individual s wealth but his whole well being Then however we must face another question—whether the happiness of the individual is the end of the state Plato for example seems to answer this question in opposite ways

In the *Protagoras* it is said that the desire for self preservation gathered men into cities This is part of the Promethean legend of the origin of civilization As told by Aeschylus—and in a similar account of early history by Lucretius—the story intimates that men contract to live together for protection against violence and to enjoy a better life—the fruits of civil society or civilization

But in the *Republic* Socrates says that in constructing the ideal state the aim is not the disproportionate happiness of any one class but the greatest happiness of the whole To the objection of Adeimantus that the citizens may be miserable in such a state, Socrates replies that we must consider whether we would look to their greatest happiness individually or whether this principle of happiness does not rather reside in the State as a whole Later Socrates reminds Glaucon who wonders whether the members of the guardian (or ruling) class will not be unhappy that we are fashioning the State with a view to the greatest happiness not of any particular class but of the whole

Aristotle criticizes Socrates for depriving even the guardians of happiness and for saying that the legislator ought to make the whole state happy In his own view the whole cannot be happy unless most or all or some of its parts enjoy happiness In this respect happiness is not like the even principle in numbers which may exist only in the whole but in neither of the parts When Aristotle asserts that the state exists for the sake of a good life he seems to have the happiness of individuals in mind for he excludes slaves and brute animals from membership in the state on the ground that they can have no share in happiness or in a life of free choice

But Aristotle also seems to give the state preeminence over the individual Even if the end is the same for a single man and for a state he writes that of the state seems at all events something greater and more complete whether to attain or to preserve. This does not seem to him inconsistent with thinking that that form of government is best in which every man whoever he is can act best and live happily

Nor is Hegel reluctant to embrace both horns of the dilemma Civil society rather than the state in its perfect realization seems to be devoted to the attainment of selfish ends such as individual happiness But Hegel also says it is perfectly true that the end of the state is the happiness of the citizens If all is not well with them if their subjective aims are not satisfied if they do not find that the state as such is the means to their satisfaction then the footing of the state is itself insecure

THE FOREGOING CONSIDERATIONS of the nature origin and end of political society enter into the various conceptions of the ideal state which appear in the tradition of western thought They also have a bearing on the division of social classes in the state on the duties of the statesman or prince, and the principles of statecraft—the art or science of the ruler Finally they have implications for the relation of states to one another and for the different historic formations of the state

All the modern writers who make some distinction between the state of nature and the state of civil society seem to agree that independent or sovereign states in their relation to

on another are in a state of nature Identifying the state of nature with the state of war Hobbes remarks that though there had never been any time wherein particular men were in a *condition* of war one against another yet in all times kings and persons of sovereign authority are in the state and posture of gladiators which is the posture of war

Similarly to the question Where are or ever were there any men in a state of nature? Locke replies all princes and rulers of independent governments all through the world are in a state of nature Because bodies politic remain in a state of nature among themselves they experience according to Rousseau all the inconveniences which had obliged individuals to forsake it With the same intent Montesquieu observes that princes who live not among themselves under civil law are not free they are governed by force they may continually force or be forced

In Kant s opinion states viewed as nations in their external relations to one another—like lawless savages—are naturally in a non juridical condition and he adds that this natural condition is a state of war Similarly Hegel writes that since the sovereignty of a state is the principle of its relations to others states are to that extent in a state of nature in relation to each other

On any of the theories concerning the origin of the state it may be asked why political society cannot be enlarged to include all mankind *If for example in Aristotle s view the state is* a union of villages as the village is a union of families why may not a further expansion of political society be brought about by a union of states?

The question is not simply one of geographical limits or extent of population The modern national state though normally larger than the ancient city-state remains an individual state and in the same external relationship to other states. Even the expansion of a city-state like Rome at the greatest extent of its imperial domain does not exemplify the principle of the world-state unless it is proposed that the political unification of mankind be brought about by conquest and maintained by despotism

Though Aristotle describes the state as formed by a combination of villages he does not propose a combination of states to form a larger community His reason may be that the essence of the state lies in its self sufficiency Consequently the best limit of the population of a state is the largest number which suffices for the purposes of life and can be taken in at a single view and the territory need be no larger than one which enables the population to be most entirely self sufficing

The moderns in contrast propose the expansion of the political community by the amalgamation of separate political units Montesquieu for example suggests that by entering into a confederate republic a number of small states can obtain the security which none of them has by itself If a republic be small he writes it is destroyed by a foreign force if it be large it is ruined by an internal imperfection A confederate republic he thinks has all the internal advantages of a republican together with the external force of a monarchical government This form of government Montesquieu continues is a convention by which several petty states agree to become members of a larger one which they intend to establish It is a kind of assemblage of societies that constitute a new one capable of increasing by means of further associations till they arrive at such a degree of power as to be able to provide for the security of the whole body

It is not security against external aggression, but internal peace which leads Rousseau to propose an association more extensive than anything Montesquieu seems *to have in mind*—a confederation of *all* the states of Europe But he does not see beyond Europe to all the states of the world He regards the great city of the *world as something less than a* political society with civil laws for he speaks of it as the body politic whose general will is always the law of nature

Nor are the American Federalists Hamilton Madison and Jay able at the end of the 18th century to envisage the unlimited extension of the principl of federal union They content themselves with arguing for the possibility of so extensive a union as the projected United States of America against those who quoted the observations of Montesquieu *on the* necessity of a contracted territory *for a* Republican Government

Before our own day Kant alone seems to contemplate the possibility of a world state *through federal union* The cosmopolitical ideal he says is a universal union of states analogous to that by which a nation becomes a state The postulate of reason which obliges men to quit the state of nature and form a civil union applies to states as well The natural state of nations as well as of individual men Kant writes is a state which it is a duty to pass out of in order to enter into a legal state But the ideal is impracticable in Kant s opinion—again because of the supposed limits of government with respect to extended territories and populations

With the too great extension of such a union of states over vast regions any government of it and consequently the protection of its individual members must at last become impossible Kant therefore proposes as an alternative a permanent congress of nations but one which being a voluntary combination of states would be dissolvable at any time — a mere league or confederacy and not such a federal union as is embodied in the United States of America founded upon a political constitution and therefore indissoluble

The further implications of Kant s proposal the alternative it replaces and Hegel s objections to either are discussed in the chapter on WAR AND PEACE Here it seems appropriate to conclude with that vision of the world state which appears early in the tradition of the great books It is conceived not as a world wide federal union but as a universal or unlimited community in which all men are citizens together even as they belong to one human brotherhood

If our intellectual part is common argues the philosophical Roman Emperor Marcus Aurelius the reason also in respect of which we are rational beings is common if this is so common also is the reason which commands us what to do and what not to do if this is so there is a common law also if this is so we are fellow citizens if this is so we are members of some political community if this is so the world is in a manner a state

Centuries later Dante in the first book of his *De Monarchia* recaptures this ancient vision of the world state Because a plurality of authorities is disorder authority must be single and therefore Dante argues world government is necessary for the well being of the world It must be conceived as governing mankind on the basis of what all have in common By that common law it leads all toward peace

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in 4 HOMER *Iliad* BK II [265 283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the passage is in section d of page 12

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lo ver halves of the page For example in 53 JAMES *Psy hology* 116a 119b the passage begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lo ver halves of the left hand s de of the page the letters c and d to the upper and lo er halves of the right hand side of the page For example in 7 PLATO *Symposium* 163b 164c the passage begins in the lo ver half of the left hand s de of page 163 and ends in the upper half of the right hand s de of page 164

AUTHOR S DIVISIONS *One or more of the main divisions of a work (such as* PART BK CH SECT) are sometimes included in the reference line numbers in brackets are given in cer ta n cases *e g Il ad* BK II [265–283] 12d

BIBLE REFERENCES The references are to book chapter and verse When the King James and Douay versions d ffer in title of books or in the numberin of chapters or verses, the King James version is cited first and the Douay indicated by a *(D)* follows *e g* OLD TE TA MENT *N hemiah* 7 45—*(D) II Esdras* 7 46

SYMBOLS The abb eviation esp calls the reader s attention to one or more especially relevant parts of a whole reference passim sign fies that the topic is d scussed intermit tently rather than continu usly in the ork or passage cited

For additional informat on concerning the style of the references see the Explanation of Reference Style for general guidance in the use of *The G eat Ideas* consult the Preface

1 *The nature of human soc ety*

7 PLATO *Republ c* BK II 316c 319c BK V 356c 363b 365d / *Laws* BK III 664a 666c

9 ARISTOTL *Ethics* BK VIII H 12 [116 b11 15] 413d-414a / *P lu cs* BK I CH I 2 445a 446d BK II CH I 2 455b d-456c BK III CH I [1274b32 1275 3] 471b CH 3 [12,6b 12] 473b c CH 4 [12,6b17 35] 473c d CH 6 [12 8b15 29] 475d-476a

12 EPI TETUS *D sc urses* BK I CH 23 128c d BK II CH 2 165a d

12 AURELIUS *Meditati s* BK II SECT I 256b d BK IV SECT 4 264 BK V SECT 6 271c d BK VI ECT 13 280c CT 55 283b c K VIII SECT 34 288a b BK IX SE T 9 292b d S CT 23 293 K SEC 8 303 b

18 AUG TINE *City f God* K II CH 21 161b-162d BK XII CH 27 359c 360 c BK X CI 5 513d 514b CH 13 17 519 523 CH 21 524 525b H 24 528b-c

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21 D NTE *D ine Com dy* P RADISE III [94 48] 118a c

23 HOBBES *Leviathan* PART II 99a 101a

30 BACON *Advancement of Learning* 20c d

31 SPINOZA *Ethics* PART IV PROP 35 37 433b 436a

35 LOCKE *Toleration* 4c d / *Civil Government* H VII 42b 46c C I IX SECT 128 54b c

38 MONTESQUIEU *Spirit of Laws* BK XI 69a

38 ROUSSEAU *Political Economy* 369b 370a / *S ial Contract* BK II 395a

40 GIBBON *Decli e and Fall* 96a 194 b 198d

42 KANT *Science of R ght* 402c 433d-434b 435c 436b

43 M LL *Ut litaria ism* 460a-c

48 MELVILLE *Moby Dick* 237a b

51 TOLSTOY *War and Peace* EPILOGUE II 685d 686b

54 F EUD *Group Psychology* 664a 696a c esp 664b 674a 677a 678d 684b 689b

1*a* Comparison of human and animal gregariousness h man and an mal societ es

9 ARI TOTLE *Hist ry of Animals* BK I CH I [487b35 488 14] 8d 9a BK IX CH I [608 26 3] 134b CH 2 136a b CH 40 149a 153a / *Eth s* BK VIII CH 12 [1162 16-25] 414c / *P litics* BK I C I 2 [1253a7 18] 446b-c BK III C I 9 [1280a31 34] 477d-478

12 A RELIUS *Med tat ons* BK IX SECT 9 292b-d

1b Comparison of the f mily and the state in origin, struct re and government

1c Associations intermediate between the family and the state the village or trib l commun ty civil society as the st ge be tween family and state

1d Soci l groups othe than the family or the state elig o s char table educ tion l nd economic o gani ations the co po ation

(1 *The nature of human society* 1d *Social groups other than the family or the state religious charitable educational and economic o ganizations the corporat on*)

35 LOCKE *Toleration* 4b c
36 SWIFT *Gulliver* PART III 106a b
38 MONTESQUIEU *Spi it of Laws* BK XX 149a c BK XXI 170d BK XXIII 199b 200a c
38 ROUSSEAU *Pol ti al Economy* 369b 370a
39 SMITH *Wealth of Nat ons* BK I 28b d 51a 56b BK V 343b d 346b 357c
40 GIBBON *Decl ne and Fall* 191c 200a esp 191c 194a 195c 198d 199a 299b 304d esp 299c d 668d 670b
41 GIB ON *Decl ne and Fall* 389b 390b
42 KANT *Science of Right* 442c d 444a-c
46 HEGEL *Ph losophy of R ght* PART III par 201 68a par 229 75b par 235 76a par 249 256 78c 80a par 264 84a par 288 289 97a d par 302 303 101a 102a par 308 102c 103a ADDITIONS 151 141b c 174 146d 147b / *Ph losophy of History* PART IV 335a 336c 340d 341c 342c d
50 MARX *Capital* 149c 150a
50 MARX ENGELS *Commun t Manife to* 423c d
51 TOLSTOY *War a d Peace* BK V 198b 203a EPILOGUE II 685d 686a
54 FREUD *G oup Psychology* 670b c 674b 676d

2 The gener l theory of the state

2a Defin t ons of the state or political community its form and purpose

7 PLATO *Republ c* BK I II 301c 319a BK IV 342a 344a BK V 356c 363b 365d / *Laws* BK I 678b c K IX 754a b BK XII 795b-c
9 ARISTOTLE *Ethics* BK I CH 2 339b d / *Polit cs* BK I CH I [1252 1-6] 445a CH 2 [1252b27 1253 39] 4 6a d BK II CH I [1260b37]-CH 2 [1261b15] 455b d-456c CH 5 [1263b30-1264 10] 459a b BK III CH I [1274b32 40] 471b c 1 3 [1276a-]-CH 4 [1276b35] 473a d CH 6 [12 8 15 29] 475d 476a CH 9 [128 31 1281a2] 477d-478 CH 12 [1 82b15 18] 480c BK VII C I 8 532c 533a
13 VIRGIL *A n d* BK VI [47-853] 233b 234a
18 AUGUSTINE *City of God* BK II CH 21 161b 162d BK IV CH 4 190d BK XIX CH 21 24 524a 52 c
20 AQUINAS *S mma Theol gica* PART I II Q 90 A 2 206b 207a Q 9f A I 230d 231c Q I) A 2 252b 253a
23 HOB ES *Lev athan* INTRO 47a b PART I 71d 73a 97c-d PART II 99a 104d 116c d 148b 153a
27 SHAKESPEARE *T o l s a d Cr ssida* ACT I SC III [5 13] 108d 109c
30 BACON *Advancement f Learning* 34a
31 SPINOZA *Ethics* PART I PROP 37 SCHOL 2 435b-43f a
35 LOCKE *Tolera on* 3a 16c 17a / *Civil Govern ment* CH VII SECT 87-90 44a-45a CH VII SECT 95-99 46c-47c CH IX 53c 54d CH X SECT 133 55b CH XI 55b 58b passim esp SECT 136 56c d CH XIX SECT 217 75a SECT 222 75d 76c
38 MONTESQUIEU *Spirit of Laws* BK I 3b-c BK XI 69a c
38 ROUSSEAU *Political Economy* 368d 369a 370b c 374b-c 380d 381a 381c 382b / *Social Contract* BK I 391b 393b BK II 395a b 396d 398b BK III 417d
40 GIBBON *Decline and Fall* 91b 96a
42 KANT *Science of Right* 408c-409c 435a-436c 438d 439a
43 FEDERALIST NUMBER 29 101a NUMBER 41 132c NUMBER 43 141d NUMBER 51 164c d
46 HEGEL *Philosophy of Right* PART III par 256-258 79d 81c par 260 82a 83a par 267 84b par 270 84d 89c ADDITIONS 161 162 143a 144c / *Philosophy of History* INTRO 170c 178a PART I 230a-c PART IV 321a
54 FREUD *C vilization and Its Dis ontents* 780b d

2a(1) Comparison of the state and the so l the conception of the state as a living organism the body pol tic

7 PLATO *Republic* BK II IV 316a 356a BK V 363b 364b BK VIII 401d-416a esp 402b c / *Laws* BK III 669d 670b BK XII 794b-796d
9 ARISTOTLE *Politics* BK I CH 5 [1254a24 b4] 447d 448a CH 13 [1260a4 0] 454c d BK III CH 4 [1277a5 13] 474a BK IV CH 4 [1290b21 4] 489d-490a [1291a24 33] 490c BK VII CH 8 [1328 21 b5] 532c d
14 PLUTARCH *Coriolanus* 177a b / *Agesila s* 495c d / *Phocion* 605a b / *Agis* 648b d 649b / *Aratus* 834d
18 AUGUSTINE *City of God* BK III CH 10 172d
23 HOBBES *Lev athan* INTRO 47 b PART I 107d 116 d 117b 122b 124b 126b-d 148b 153a
25 MONTAIGNE *Ess ys* 504c 505d
27 SHAKESPEARE *Co iolanus* ACT I SC I [67 167] 352a 353a
28 HARVEY *Mot on of the He rt* 267a b
32 MILTON *A opagi ca* 407b
35 LOCKE *C l Government* CH XIX SECT 212 74a b
36 SWIFT *Gull er* PART II 112 115b
36 STERNE *Tr t m Shandy* 215b 216b
38 MONTESQUIEU *Sp r t of Law* B X 61b d 62a
38 ROUSSEAU *P l tic l Economy* 368d 369a / *S cial Cont act* BK III 407a 418a-c 419c 420a
42 KANT *J d ement* 547b c
43 FEDERALIST NUMBER 3 101b
46 HEGEL *Ph os phy of Right* ART III par 269 84d par 271 89c par 278 92c 93a ADDITIONS 157 142b-c 161 143 b 168 145c d / *Philosophy of H t ry* T 174d 188a b P T I 222 c PART III 302d 303c PART I 321a

2a(2) The state as a corporate person

23 HOBBES *Leviathan* PART I 97c d PART II 100c 101a 101d 102c 104a b 117b 120c 122b-c 130b d 132a b

35 LOCKE *Civil Government* CH VIII SECT 95-99 46c-47c

38 ROUSSEAU *Political Economy* 368d 369a / *Social Contract* BK I 392 392c 393b BK II 395a b 396d 397a BK III 406b d-409a passim esp 406b d-407a 412c 418a 419c-420a

42 KANT *Science of Right* 452b 454b-c

46 HEGEL *Philosophy of Right* PART III 55a 114 c ADDITIONS 191 150a c

2 (3) The progressive realization of the state as the process of history the state as the divine idea as it exists on earth the national spirit

46 HEGEL *Philosophy of Right* PART III par 256-259 79d 82 par 270 84d 89c par 340-360 110b 114a esp par 349 111d 112a ADDITIONS 19-20 119 120b 152 141c d 164 144c 145a / *Philosophy of History* INTRO 170c 178a esp 171b 176d 177a 180c 182c 203b-206a c PART I 230a 231b 257c 258d PART I 266a 267 271c d PART III 287a 288b PART IV 327d 328a 333b-c 351d 354a 357b c

2b The state as a part or the whole of society

7 PLATO *Republic* BK V 364c 365d / *Laws* BK X 776c

9 ARISTOTLE *Ethics* BK VIII CH 9 [6 8-30] 412b-c / *Politics* BK VI CH 8 [328b2 22] 532d 533a BK VIII CH I [1337a28 30] 542b

18 AUGUSTINE *City of God* BK XIX CH 7 522b-523a

19 AQUINAS *Summa Theologica* PART I I Q 21 A 4 R 3 719d 720a

20 AQUINAS *Summa Theologica* PART I II Q 96 A 4 AN 233 d PART II Q I A 10 434c-435c Q 12 A 2 443b-444b

35 LOCKE *Toleration* 2d 3 7c 16a c / *Civil Government* CH X SECT 138 40 57b 58a

40 GIBBON *Decline and Fall* 299b d

43 MILL *Liberty* 271 d 272d 273d 302d 312a 320c d

46 HEGEL *Philosophy of Right* ADDITIONS 162 143b-144c / *Philosophy of History* INTRO 174a d 175d 176 177b 178a 182d 183 PART IV 316a d 333b-c

2c The source or principle of the state sovereignty the sovereignty of the prince the sovereignty of the people

OLD TESTAMENT *Judges* 8 - 3 / *I Samuel* 8— (D) *I Kings* 8 / *II Samuel* 2.4—(D) *II Kings* 2 4

9 ARISTOTLE *Politics* BK I CH [75a2 b2] 472a-c CH 3 [64 b] 473b BK IV CH 9 [1 94b34 39] 494d

14 PLUTARCH *Tiberius Gracchus* 678b d

15 TACITUS *Histories* BK I 197a c

20 AQUINAS *Summa Theologica* PART I II Q 90 A 3 207a c Q 96 A 6 ANS 235a d

23 HOBBES *Leviathan* PART I 71d 73a 97c d PART II 100 105 109b c 117c d 130d 149d 150b

35 LOCKE *Civil Government* CH VIII SECT 95-99 46c 47c CH IX SECT 127 54a b CH X SECT 132 55a b CH XI SECT 135 55d 56b SECT 141 58a b CH XII SECT 149 59b d CH XIV SECT 163 63a b CH XV SECT 171 65 b CH XVI SECT 179 66d 67a CH XVII SECT 198 70d 71a CH XIX SECT 243 81d

38 MONTESQUIEU *Spirit of Laws* BK I 3b-c BK II 4b 7c d BK XX 109

38 ROUSSEAU *Inequality* 323d / *Social Contract* BK I 392 393b BK II 395a d 396d 397a 399b-400c BK III 406b d 409a 424a b

40 GIBBON *Decline and Fall* 51c d 100d 241b

41 GIBBON *Decline and Fall* 74c d

42 KANT *Science of Right* 436c 437 d 439a 441d 445 -c 448b d 450a b 451c d

43 DECLARATION OF INDEPENDENCE [1 5] 1a b [43 47] 2a [1 9-121] 3a b

43 CONSTITUTION OF THE U S PREAMBLE 11a c AMENDMENTS IX X 17d

43 FEDERALIST NUMBER 2 84d 85a NUMBER 33 108b-c NUMBER 39 126b 128b NUMBER 46 150b-c NUMBER 49 159c NUMBER 84 252b-c

43 MILL *Liberty* 267d 269c / *Representative Government* 344d 355b d

46 HEGEL *Philosophy of Right* PART par 275 92a b par 279 93a 94d par 3 3 1 106c d ADDITIONS 167 145c / *Philosophy of History* PART II 272b 273a PART IV 355 d 365a 366b

51 TOLSTOY *War and Peace* EPILOGUE II 680b 684 passim

2d The economic aspect of the state differentiation of states according to their economic systems

6 THUCYDIDES *Peloponnesian War* BK I 350d 351a 352c d

7 PLATO *Republic* BK II 316c 319c BK 341c d BK V 364c 365d / *Laws* BK V 691d 697a

9 ARISTOTLE *Politics* BK CH II [59a23-36] 453c d BK CH I [6 b37 126 8] 455b d CH 5 458 -460 CH 6 [1 65a28 b18] 460 461a CH 7 461d-463c CH 8 [67b30-36] 463c d [268 16-b4] 464 b CH 9 [1 70 15 b6] 466b c BK III CH 9 [128 b 6-32] 478b-c BK V CH 9 [3 9b14 3 0a2] 511d 512b BK VI CH 4 522a 523b CH 8 [13 1b 34] 525b-c BK VII CH 8 0 532 534d

14 PLUTARCH *Lycurgus* 32a-48d / *Solon* 64b d 77a c / *Tiberius Gracchus* 671b d 681a c / *Caius Gracchus* 681b d 689

(2 *The general theory of the state* 2d *The economic aspect of the state d fferentiation of states acco di g to the r economic systems*)

23 Hobbes *Leviathan* part i 94d 95a part ii 124b 126d 156c 157a
35 Locke *Toleratio* 16a c / *C vil Government* ch v sect 38 33b c sect 45 34d 35a ch vi sect 72 73 40d 41a ch viii sect 117 52b sect 120 121 52d 53b ch xi sect 138 140 57b 58a
36 Sterne *Tris ram Shandy* 215b 216b
38 Montesquieu *Spi it of Laws* bk iv 16a 17b bk v 19a 21d 23a 25c 27d 28a 29b 30a bk vii 44a-48a bk xiv 105a bk xv 109a b 110d 112d bk xx 147a d bk xx-xxi 151b 153d bk xxii 174a b 183b 184b
38 Rousse u *Polit cal Economy* 377b 385a c / *Social Contract* bk ii 405c d bk iii 415b 417c 421c d
39 S ith *We lth of Nations* bk iii 163a 181a c esp 165a 166b 176a 181a c bk iv 182a 300d esp 182a b 188a 190b 193a 195a 225d
40 Gib on *Dec' ne and Fall* 21c 22c
43 Federalist number 11 13 53b 60a pas im num er 21 79b 80c nu iber 30 101b nu i er 35 112a 114c number 54 170a 172b pa im
46 Hegel *Ph losophy of Right* part iii par 299 99c 100b
50 Marx *Capi al* 163a c 171d 176a esp 174 175 275c 278a c passim
50 Marx Eng ls *Communist Man festo* 416c d
54 Freud *N u Introductory Lectu es* 882c 884c

2e The political str cture of the state its determin tion by the form of govern ment

7 Plat *Rep bl c* bk viii 401d 416a / *Stat s ma* 598b 604b
9 A istotle *P l tics* bk i ch i 445a b bk ii ch i 455b d bk iii ch 3 473a c ch 6 [1278b6–14] 475d ch 13 [1283b5 7] 481c ch 17 486c 487a bk iv c 1 3 4 488d-491d esp ch 4 [1290b 1 1 91b13] 489d-490d ch 11 12 495b 497b bk v h 9 [1309b14 1310 2] 511d 512b bk v i c 1 8 532c 533 / *Rh toric* bk i c 4 [1360 17 36] 600c d ch 8 608a c
15 T citus *A n ls* bk iv 72a b
23 Hobb s *Leviathan* part ii 101a b 104d 105c 117b 124b 138b 151c 152a part i i 228a b
35 Lock *Civil G vernm nt* ch viii ect 95-99 46c-47c ch x sect 132-ch xi ect 134 55a d ch xix sect 211 212 73d 74b
38 Mo te quieu *Spi it of Laws* bk i ii 2d-4a bk xi 69d 70a
38 Rousseau *Ineq al y* 359a d / *S c al Co t act* bk iii 406b d-409a 423a-424d
42 Kant *Scienc of R ght* 436b c 441b c 450 452a
43 M ll *Representat ve Government* 327b d 332d
46 Hegel *Philosophy of Right* part iii par 273 274 90c 92a par 276 92b additions 166 145b c 170 145d 146a 178 147d 148a / *Phi losophy of History* intro 173a 175c part iv 364d 365c

2f The prim cy of the state or the human pe son the welfare of the state and the hap piness of its members

5 Aeschylus *Seven Against Thebes* 27a 39a c esp [1011 1084] 38b 39a c
5 Sophocles *Ant gone* 131a 142d esp [162 10] 132c d / *Ajax* [1047-1090] 152a b / *Philoc ete* 182a 195a c
5 Euripides *Phoenician Maidens* [834 1018] 385c 387b / *Iphigenia at Aulis* 425a-439d esp [1255 1275] 436c [1368 1401] 437c d
6 Herodotus *History* bk i 6c 7a
6 Thucydides *Pel ponnesian War* bk ii 397d 398c 402b-404a bk vi 520a d
7 Plato *Crito* 213a 219a c esp 216d 219a c / *Republic* bk i 302c 306a bk iv 342a-d 350b d bk v 364c 365d bk vi 379d 38 b bk vii 390b-391b 401a b / *Statesman* 600d 601b / *Laws* bk iii 672d 676c bk v 692c 693a bk ix 754a b bk xi 776c 777d 778b
9 Aristotle *Ethics* bk i ch 2 [1094b8 10] 339c d bk v ch i [1129b15 18] 377a / *Poli tics* bk i ch 2 [1253 19-29] 446c bk ii ch 5 [1264b16 25] 459d 460a bk iii ch 4 473c 475a ch 6 475d-476c ch 12 [1282b15 18] 480c bk vii ch 1-3 527a 530a ch 8 53 c 533a ch 13 536b-537b bk viii ch 1 [1337a 28 30] 542b
12 Epictetus *Discourses* bk i ch 19 125b 126c bk ii ch 10 148c 150a
12 Aurelius *Meditations* bk v sect 1 268b d sect 6 269b d sect 16 271c d sect 22 272b bk vi sect 14 274d 275a sect 54 279c bk ix sect 23 293c
14 Plutarch *Lyc gus* 32a-48d esp 44d 45c / *Numa Pompil us* 51c 52b / *Solon* 71d / *De mosthenes* 699c 700a
18 Augustin *City of God* bk ii ch 21 1 1b 162d bk xix ch 17 522b 523a ch 21 524a 525a
19 Aquin s *Summa Theologica* part i q 60 a 5 ans 313b 314c q 96 a 4 512d 513c p rt i ii q 21 a 3 718d 719c a 4 rep 3 719d 720a c
20 Aquin *Summa Theologica* part i ii q 90 a 2 206b 207a a 3 rep 3 207a-c q 92 a 1 ans nd rep 1 3 4 213c 214c q 94 a 2 a 3 221d 223a q 96 a 3 ans and rep 3 232b-233a a 4 ans 233a d q 98 a 1 ans 239b 240c q 100 a 2 ans 252b 253a
23 Ho bes *Leviathan* part i 93d 94a p rt ii 104a b 113d 115a
25 Mont igne *E says* 48a 51 pass m 381a 388c 486b-489b
26 Shakesp re *Henry V* act i sc ii [183 213] 535d 536a

27 SHAKESPEARE *Troilus and Cressida* ACT I SC II [,8-134] 109a-c / *Coriolanus* ACT C I [67 167] 352a 353a

30 BACON *Advancement of Learning* 71 6a passim

31 SPINOZA *Ethics* PART IV PROP 37 SCHOL 2 435b-436a

32 MILTON *Samson Agonistes* [843-8 0] 358a b

35 LOCK *Toleration*, 11b 15d 16d 17b / *Civil Government* CH VIII SECT 95-99 46c-47c

38 MONTESQUIEU *Spirit of Laws* BK IV 16c BK V 18d 19d BK XI 69a-c BK XII 92b-c BK XXIII 199c BK XXVI 221c 222a

38 ROUSSEAU *Political Economy* 368d 369a 372a b 37 a 375b 376a b / *Social Contract* BK I, 391d 392b-393b 393d 394d BK II 396b-399a BK III 421c-423a

42 KANT *Pure Reason* 114b-d / *Fund Prin Metaphysic of Morals* 272d 273b / *Science of Right* 438d-439b

43 DECLARATION OF INDEPENDENCE [1 15] 1a b

43 CONSTITUTION OF THE U.S PREAMBLE 11a AMENDMENTS I-X 17a-d

43 FEDERALIST NUMBER 43 143b-c NUMBER 45 147c 148a

43 MILL *Liberty* 267b d 274a 293b-323a esp 297a, 322d 323a,c / *Representative Government* 337b 338b-c 392b-396d / *Utilitarianism* 453a-454a 460a-461c 464d-476a c passim

46 HEGEL *Philosophy of Right* PART II par 185 64b-d par 876 -c par 36 76a-c par 58 80c d par 260- 61 82a-83d par 2, 84d 89c par 88-289 97a d pa 94 98b-d par 3 3 107 par 328 108b-c par 337 109d 110a ADDITIONS 47 124a b 6- 8 135 136b 127 137b 143 139d 140a 145 140b 154 56 142 b 158 142d 62 143b-144c 177 147d 189 149d / *Philosophy of History* INTRO 164b 166b 170c 172b 192 193a PART 271c d 276a PART III 289b-d 298c 299a A T IV 320c 321a 365b-c 366c 367a 367d 368a

50 MARX ENGELS *Communist Manifesto* 429c

51 TOLSTOY *War and Peace* BK VI, 238c 243d 260a 262a BK XI 505 511b 513d 521 esp 513d 515a 527b-532 esp 527b-528b BK X I, 537b-538a BK XI 577b-c EPILOGUE I 670d-671c

54 FREUD *War and Death* 757b-c / *Civilization and Its Discontents* 799b-d

2g Church and state the relation of the city of God to the city of man

OLD TESTAMENT *Judg* 8 2 23 / *I Sam* / 8 1 18- 9,24 2 2 4 9 13—(D) *I King* 8 1 8- 9,24 4 7 9 3 / *II Chronicles* 19 11—(D) *II Paralipomenon* 19 / *Psalms* 48 -8 8- 87 7 —(D) *Psalms* 47 -9 7 8 86 6 / *Isaiah* 43 15—(D) *I* 43 5 / *Daniel* 44 4 17 5 3 —(D) *D* 1 44 4 4 9

APOCRYPHA *Rest of Esther* 14 3—(D) OT *Esther* 14 / *Wisdom of Solomon* 6 1 4—(D) OT *Book of Wisdom* 6.2-5 / *II Maccabees* 7 0—(D) OT *II Machabees*, - 30

NEW TESTAMENT *Matthew* 17:24 - -- 15 -2 —(D) *Matthew* 17:23 -6 -- 15 -- / *Mark* 12.13 17 / *Luke* 0:21 6 / *John* 18 33- - / *Acts* 5:2 -9 / *Romans* 13 1-8 / *I Corinthians*, 15:24 5 / *Ephesians* - 19 / *I Timothy* - 1 3 / *Titus* 3 1 / *Hebrews* 1 14 / *I Peter* - 13, 17

7 PLATO *Laws* BK X 757d 761b 769d 771b

9 ARISTOTLE *Ethics* BK VIII CH 9 [1160a19- 9] 412b-c / *Politics* BK II CH 14 [1 85a,] 483a b [1285b 0- 3] 484a BK V CH II [1314b36-1315a4] 517d BK VI CH - [1 1 55-b1] 520a CH 8 [13-2b19- 9] 526c BK VII CH 8 [13 8b2 2-] 532d 533a CH 9 [13 9a-0-34] 533d CH 10 [1330a5-14] 534c CH 1- [1331 19-8] 535d [1 31b4 ,] 536a

12 EPICTETUS *Discourses* BK I CH 30 138a c BK II CH 5 143d 144a BK IV CH 3 224b-d

13 VIRGIL *Aeneid* BK XII [1 5 194] 358b-359a [8 9-84] 376a b

14 PLUTARCH *Numa Pompilius* 52d 53a 5 b / *Themistocles* 92a-c / *Camillus* 114c 116a / *Fabius* 142d 143a / *Marcellus* 247c 248b / *Cleomenes* 659d 660a

15 TACITUS *Annals* BK III 59d 60c

18 AUGUSTINE *Confessions* BK III par 15 17a b / *City of God* BK I PREF-CH 6 129a 132d BK IV CH 33 34 206c 207a c BK V CH 15 16 220d 221b CH 25 228b-c BK XI CH 1 322b d 323a BK XV X 1 1 397b d 507a c esp BK XV CH 1-5 397b d-400 BK XVII CH 1-3 449a 451c BK XVIII CH 1- 472b d-473d BK XIX CH 5 513d 514b CH 11 516d 517b C 1 4 520a d CH 17 522b-523a CH 19- 6 523b 529a

20 AQUINAS *Summa Theologica* PART I II Q 96 A 4 235a d Q 100 A ANS 252b-253a PART II II Q 10 AA 10-11 434c-436b Q 11 A 3 440b-441a Q 2 A 2 443b-444b

21 DANTE *Divine Comedy*, HELL, II [0- 7] 2d XXXI [1-69] 51b-52a PURGATORY VI [58 51] 61b-62 XIII [85-96] 72d X I [5 129] 77b-78a XXX I [100]-XXXIII [78] 103c 105a PARADISE V [111] 113 114d

23 MACHIAVELLI *Prince* CH X 16d 17d

23 HOBBES *Leviathan* PART 80d 81 82b-83 83d 84c ART I 111b 112 151a 155d 156b 163c d P T I 165a 167 171c 172a 177c 180a 187 188a 191b 193c d 198a 246a c ART IV 248a 249b 251c 252d 266a-c 273c 274a 275 278d

25 MONTAIGNE *Essays* 306b-d

26 SHAKESPEARE *1st Henry VI* ACT SC I 5b 6 ACT I S [1 45] 14b 15d / *King John* 376 -405a e P A T C 1 386 389d ACT S [4] 399b- 1 400 -401d / *2nd Henry IV* A T C [87 5] 470 b A V C 1 [-96] 487b-488b C II [1 489d-490 / *Henry V* CT I

(2 *The general theory of the state* 2g *Church and state the relat on of the city of God to the city of man*)

47 SH KESPEARE *Henry VIII* 549a 585a c esp ACT III SC II 568b 573d
30 BACON *Advancement of Learning* 27c
32 MILTON *New Forcers of Conscience* 68a b / *Lord Gen Cromwell* 69a b / *Paradise Lost* BK XII [485 551] 3 9b 331a / *Areopagitica* 386b 388a
35 LOCKE *Toleration* 2d 21c esp 2d 3a 7c 13a b 16b 20d 21c
38 MONTESQUIEU *Spirit of Laws* BK II 7c 8c BK V 27d BK XII 85c 86a BK XVIII 134c d BK XIX 144c 145a BK XXIII 196c 197c BK XXIV XXV 200a 214a c BK XXVI 214b d 215a 218a 219d BK XXX 284d 285c BK XXXI 298b 308c
38 ROUSSEAU *Inequality* 327a c 358d 359a / *Social Contract* BK II 401c-402a BK IV 435a 439c
39 SMITH *Wealth of Nations* BK I 56b 57a BK IV 232b BK V 343b d 356d 357c
40 GIBBON *Decline and Fall* 13b d 197a b 229c 230a 233d 289b d 294a 299b 304d passim esp 299b d 303c 328c 330a c 349c 351d 382a 383b 390c 393d passim esp 392c 443d-446b esp 444c 445b 451d 453 457b d-460b passim 582c 611d 612a 623d 624b 631d 632a 642c 643a 863c [n 68]
41 GIBBON *Decline and Fall* 147d 148c 195a 199c 02d 204b 207a e p 205d 206b 212d 213d 214c 215c 252c d 352b 353b 360b 361b 381d 383c 417b-418d 557c 562b esp 560d 561c 567c 569d 582c 589d esp 586a-c 588b 589d
42 KANT *Science of Right* 442c d 444a c
43 ARTICLES OF CONFEDERATION III 5b
43 CONSTITUTION OF THE U S ARTICLE VI [591 599] 16d AMENDMENTS I 17a
43 FEDERALIST NUMBER 52 165c NUMBER 57 177b
43 MILL *Liberty* 279a d 290 291a / *Representative Government* 341a-c 437d-438b
44 BOSWELL *Johnson* 189c d 251c 314c 315b 445b-c
46 HEGEL *Philosophy of Right* PART III par 270 84d 89c ADDITIONS 16 143b 144c / *Philosophy of History* INTRO 175c 177b 192c d 205d 206 c PART I 216b-217c 245d 247b PART III 308b-c 309d 310c 311b d PART IV 316a d 321b 322 325d 326b 331b d 333b-c 336c 337d 345c 346c 350b-c 351b 354 365b-c
47 GOETHE *Faust* PART II [10 977 11 034] 267 268b
51 TOLSTOY *War and Peace* BK IX 354b c 374d 377b BK X 435c-436c BK XIII 572d 574a
52 DOSTOEVSKY *Brothers Karamazov* BK II 28d 32a BK 127b 137c passim

3 The origin preservation and dissolution of the state

3a The development of the state from other communities

6 THUCYDIDES *Peloponnesian War* BK II 391c d
7 PLATO *Laws* BK III 666a-c
9 ARISTOTLE *Ethics* BK VIII CH 12 [1162 16-19] 414c / *Politics* BK I CH 2 [1252^b9-1253 1] 445d-446b
12 LUCRETIUS *Nature of Things* BK V [1011 1027] 74b c
19 AQUINAS *Summa Theologica* PART I Q 96 A 4 512d 513c
20 AQUINAS *Summa Theologica* PART I II Q 91 A 2 221d 223a
35 LOCKE *Civil Government* CH VIII 46d 53c
36 STERNE *Tristram Shandy* 410 b
38 ROUSSEAU *Social Contract* BK III 411c d
46 HEGEL *Philosophy of Right* PART III par 181 63 d par 258 80d par 349 111d 112a / *Philosophy of History* PART II 260b 261a PART III 287a d

3b The state as natural or conventional or both

7 PLATO *Republic* BK II 316c 319a / *Laws* BK III 663d 666c BK X 760a 761d
9 ARISTOTLE *Politics* BK I CH 2 445b 446d BK III C 6 [1278^b15 29] 475d-476a
12 AURELIUS *Meditations* BK IV SECT 4 264a BK VII SECT 13 280c BK VIII SECT 34 288a BK IX SECT 9 292b d BK X SECT 6 297a b
20 AQUINAS *Summa Theologica* PART I II Q 95 A 4 ANS 229b 230c
23 HOBBES *Leviathan* INTRO 47a b PART II 100a c 101a b 113c
25 MONTAIGNE *Essays* 462d-463a
31 SPINOZA *Ethics* PART IV PROP 35 37 433b-436a esp PROP 37 SCHOL 2 435b-436a
33 PASCAL *Pensées* 304 227b 228a
35 LOCKE *Civil Government* CH II SECT 14 15 28b c CH VII SECT 87-89 44a d CH VIII 46c 53c CH XIX SECT 211 73d 74a
38 MONTESQUIEU *Spirit of Laws* BK I 1 2d
38 ROUSSEAU *Inequality* 358b c / *Political Economy* 367b / *Social Contract* BK I 387b d 392a BK II 399b-c BK III 419c d 423 c 424d
42 KANT *Science of Right* 412c-413a 433c-434c 435a-436b 437c d 450d-451a
43 MILL *Liberty* 302d 303a
46 HEGEL *Philosophy of Right* PART I par 31d 32b PART III par 203 68a-c par 94d 95a ADDITIONS 47 124a b / *Philosophy of History* INTRO 164b-c
54 FREUD *Civilization and Its Discontents* 780b d

3b(1) Man as by nature a political animal the human need for civil society

7 PLATO *Protagoras* 44a-45a / *Republic* BK II 316c
9 ARISTOTLE *Ethics* BK VIII CH 12 [1162 16-25]

414c BK IX CH 9 [1169b18–22] 423b / *Politics* BK I CH 2 [1252b27 1 53 39] 446a-d BK III CH 6 [1278b1 9] 47 d-476a
12 E ICTETUS *Discourses* BK I CH 23 128c d
12 AU ELIU *M duatio s* BK SECT 1 256b d K IV SECT 4 264a S CT 29 266a K VII SECT 13 280 SECT 55 283b-c F VIII SECT 34 288 b S CT 56 290c SECT 59 290d BK IX E T 9 292b d SECT 23 293 BK X CT 6 297a b BK XI S CT 8 303a b K XII SECT 30 310a b
18 AUGUSTINE *City of God* BK XII C 1 27 359c 360 c BK XIX CH 5 513d 514b CH 17 522b 52 a
19 AQUI *Summa Th ol g ca* PART I Q 96 A 4 512d 513
20 AQUIN S *Summ Th ologica* PART I II Q 94 A 221d 223 Q 96 A 4 ANS 233a d
21 D TE *D vine C med* PARAD SE VIII [9 148] 117d 118c
23 HO B S *Leviathan* PART I 84c 86b 93d 94a ART II 99 100c CONCLUSION 279a-c
28 H RVEY *On A imal Gener tion* 454a
30 BACON *Ad ncement of Learn ng* 20c d
31 SPI OZA *Ethics* PART IV PROP 18 SCHOL 429a d PROP 35 OROL I 2 433c d
35 LOCKE *C l Government* CH I SECT 3 15 28a-c CH VI SECT 77 42b
36 SWI T *Gull ver* PART IV 159a 163b esp 160a b
38 MON ESQUIEU *Spir t of Laws* BK I 1d 3a
38 ROUS U *Inequal ty* 330d 331d 362 d / *Social Contra t* BK I 387d 388 BK II 397 b
43 F R LI T NU B R 6 39a b NUM R I 50b-c NUM ER 15 65b d NUM R 7 69c NUMB R 34 110c d NUMBER 49 160 NU ER 55 174 d
43 M LL *Ut l ta a sm* 460a-461 469c d
46 H EL *Ph l sophy of Right* RT III pa 183 64a par 188 95 65 67a ADDI ON 47 124a b / *Ph l sophy of History* PART IV 361c d
49 DARWIN *D ent f Man* 310a d 321b
52 DO TO VSKY *B ther Ka amazov* BK V 127b-137c pas im
54 FR UD *Gr up Psy h logy* 684d / *C l at on and Its Discontent* 787a 791b

3b(2) N t ral law and the format on of the state

23 H B S *Leviath* P RT I 86c 87b 91a 96b P T I 99 d 131a
31 SPINOZA *Ethics* PA V PRO 37 SC OL 2 435b-436
35 LO KE *Cu l G ernment* C I I 25a 54d pa sim esp CH X 53c 54d I XI S CT 36 56c d
38 MONT SQU U *Sp r t of Laws* BK I 1a 2d
38 ROUS U *In quality* 329 334 c sp 330 331c
42 K NT *S ien e f Right* 433 -434
43 DE R O O I D ND N [1 5] 1 b

43 F DERALIST NUMB R 43 143b-c
46 H GEL *Philosophy of H tory* PART IV 361c d

3c The condition of m n in the state of na ture and in the state of ci l soc ety the st te of war in relat on to the tate of nature

7 PLATO *Protagoras* 44a-45 / *Laws* BK I 641a
9 ARI TOTLE *P litics* K I CH 2 [1253 30–39] 446d
15 TACITUS *A als* BK I 51b
18 AUGUSTINE *City of God* BK XIX C 12 517d 518c
19 AQUINAS *Summa Theologica* PART I Q 96 A 4 512d 513c
23 HOBBES *Levia han* ART I 84c 87b 90b d 94b c 96a b PART II 99 b 131a-c 138c
25 MONTAIGNE *Essays* 93b 94a
30 BACON *Advancement of Lea ning* 20c d
31 S NOZA *Eth cs* PART IV PRO 37 SCHOL 2 435b 436a
35 LOCKE *Ci l G ernment* CH I IX 25a 54d esp C I II III 25d 29d CH IX 53 54d CH XI S CT 136 37 56c 57b CH XI ECT 45 46 58d 59a
38 MONTESQU EU *Sp rit f Laws* BK I 2b 3 BK VIII 52a
38 ROUSS AU *Inequ lity* 329a 334a c 342c 345 354a b 355b c 362a 366d / *P l tical Economy* 374a b / *S cial Co tract* BK I 389d 390 391b 393b-c BK II 398a b 399b
39 SMI H *Wealth of Natio* BK V 309a 311c
41 GI ON *De l ne and Fall* 86d 87b 237c d
42 KANT *Pure R on* 222b c / *Sc nce of R ght* 405d 406c 408 409 433c-434d 435 436b 450d-451a 452a d
43 F D R LIST NUMB R 51 164c d
44 BOSWELL *Joh n* 204d 205b
46 H GE *Ph los phy of Right* ART III par 187 65a c par 194 66c d par 333 334 109b / *Ph losophy of Hist ry* NTRO 171c 172b 199b c PART IV 317d 318a

3d The social contract as the or g n of ci il soc ety or th tate univers l con nt as the b s of the con t tution or go ern ment of the t te

7 PL TO *C it* 216d 219a c / *Rep bli* BK I 311b c / *Law* K 666b 667d / *Se nth Letter* 807a b
9 AR TO *Pol t s* K I CH 9 [1 70b20–22] 466d BK IV CH 9 [94 34 39] 494d
12 LUC ETIU *Nature of Th g* BK V [1 11–10 7] 74b-c
18 AU U TIN *C ty of God* BK IV C I 4 190d K XIX CH I 524a 525b CH 24 528b-c
20 AQU NAS *Summa Th l g* T Q 90 A 3 207 Q 97 A 3 237b 238b Q I 5 A A S 309d 316a
23 HO S *Le th n* RT I 97 d P T 100 102 109b-c 113c 133b RT I 200 b

(3 The orig n preservat n, and d olut o s of th stat 3d The social contract as the or g n of c l oc ty or the state u versal conse t as the bas s of the const tut on or government of the state)

31 SPINOZA Ethics PART IV PROP 37 SCHOL 2 435b-436a
35 LOCKE C il Government CH II SECT 14 15 28b-c CH II SECT 87—CH VIII SECT 122 44a 53c CH X SECT 132 55a b CH XI SECT 134 55b d SECT 141 58a b CH XV SECT 171 65a b CH XVI SECT 175 65d SECT 192 69c d CH XIX 73d 81d passim esp SECT 211 73d 74a SECT 243 81d
38 MONTESQUIEU Spir t of La s BK IX 58b d 60a
38 ROUSSEAU In quality 353c 355b 358b d / Polit al Economy 367b 370b c / Social Con t act BK I 387b d 394d c p 391b 392a BK II 400a c BK II 423a 424d
41 GIBBON D cl ne and Fall 403b c
42 KANT Scien f Right 412c-413a 434b c 435a-436c 437c d 450d-452a
43 DECLARATION OF INDEPENDENCE [1 15] 1a b
43 FEDER LIST NU BER 1 29a b NU BER 22 84d 85a N BER 38 121b-c NUMBER 44 144d 145a
43 MILL Liberty 302d 303a / Repr sentative G vernment 327b d 332d passim
46 HEGEL Pl l phy of Right ART I par 75 31d 32b P RT III par 258 80d 81b ADDITIONS 47 124a b 126 135c d

18 AUGUSTINE C ty of God BK II CH 21 161b-162d BK IV CH 4 190d BK XIX CH 1 524a 525a CH 23 4 528a c
21 DANTE Di ne Comedy HELL XI [13-90] 15b-16a XXXII XXXIV 47c 52d PURGATORY VI [58 151] 61b 62c XV 75b-76d
30 BACON Advancement of Learning 75c
31 SPINOZA Ethics PART IV APPENDIX X XVII 448a d
35 LOCKE C il Government CH VIII SECT 107 49b d / Human Understanding BK I CH II SECT 2 104a b
36 SWIFT Gulli er PART IV 165b-166a
38 MONTESQUIEU Spirit of Laws xxiia-d BK V 18d 19d
38 ROUSSEAU Inequality 323b-d / Polit al Economy 373c 374a 376a b / Social Con tract BK III 421c 422a
40 GIBBON Decl ne and Fall 4d
43 FEDERALIST NUMBER 14 62a d NUMBER 17 69c 70d NUMBER 27 95c d NUMBER 9 100a b NUMBER 46 150c 151a
43 MILL Rep esentat ve Government 343a 424c 425b 428b c / Ut l a ian sm 460 461c 464d 476a passim esp 469c d 473d-474b
46 HEGEL Ph lo phy of Right PART III par 6 269 84b d par 289 97b d par 325 10 d ADDITIONS 160-161 142d 143b / Ph losophy f History INTRO 172b d PART III 300c 301a PART IV 318a 320c 321a 334b-c 365b-c
49 D RWIN D cent of Man 310c-d
51 TOLSTOY Wa and P a e BK IX 384c 388a c BK XI 474a b 475b 476c
52 DO TOEVSKY B others Ka ama ov BK VI 158b-159a
54 FREUD Gr p Psychology 672 6 8d esp 674a 678a 685d 686c / Ego and Id 70 d / C l at on and Its Di co tents 780c 785d 791c

3e Lo e and justice as the bond of men in states fr endship and patr otism

5 SOP OCLE Ant gon [332 3 5] 134a b
5 EURIPIDE S ppl ant [86-364] 260d 261c / Phoenician Ma den [528-567] 382c d [991 1 18] 387a b
6 HERODOTUS H tory BK VII 225d 226b 255 d BK VIII 273d
6 T UCYDID P l p nn an Wa K II 397d 398c 402b-404a BK 1 513d 514b 534b c
7 PLATO Protago a 44a 45a / Symp um 152b d 154 b R publ BK 308b 309b BK IV 346a 356a BK V 360d 365d / La BK I 6 8d-679 K V 692b 694d BK VI 701a / Seventl Let er 814b
9 ARISTO LE Eth BK I C I [1 55 22 8] 406d C 9 2 411d 414d pa im BK X CH 6 420c 421a / P l tic K I 1 [253 29-39] 446d K 1 4 [2 2 23 b 3] 457b d c 5 [12 3 23 b] 458b d BK 9 [1280a32 1281] 47 d 478c K 1 [295b 1 34] 495c-496a
12 AURELI M d at ns BK III S T 262a b
14 PLUT R R mul 20c 21a Ly u gu 36a b 44d 45c P lop d 238d 239d / D n 784d 785a
15 T C TUS H t K 281 285a

3f Fear and dependence as the ca se of social cohesion protection and security

5 AESCHYLUS Eumenid s [681 710] 88b-c
5 SOP OCLE Ant g e [16 210] 132c d / A j [1 4 09] 152a b
6 T UCYDIDE P l p nne an Wa K II 402b-404a
7 PL P tag as 44a-45b / Republic BK II 311b-c 316c 319a
9 ARI TOTLE Pol t c BK I 1 C 6 [12 5b15 39] 475d-476a C 1 9 [1280a32 1281 2] 477d-478c BK V 8 [3 8 25 30] 510b-c
12 L CRET US Natu e of Th ngs BK V [11 1 2] 74b
18 AU U T NE C ty of God BK I C 1 30 147b-d
23 MA AVELLI P nce CH IX 15b c CH XVII 24 d
23 H Lev athan PART I 77a 77c 84c 84b 86d 87b 90b d P RT I 99a 101a 109b-c 116c d
31 S Z Ethics P RT IV PROP 37 SCH L 2 435b-436a

3g The identity and continuity of a state the dissolution of the body politic or civil society

4 The phy cal foundation of soci ty the geogr ph cal and b olog al cond tions of the state

4a Th terr tor l xtent of th t te t m po ta ce r lat e to d ff nt forms of go rnment

4b The infl ence of clim te and geography on political institut ons nd pol t cal econ omy

(5 *The soc al structure or strat ficat on of the state 5c The class s or sub group ar ng from the d v s on of labor or d t nct ons of b rth the social h rarchy*)

43 Mill *Liberty* 270a b / *Representat ve Govern m nt* 385a d 392b 399d passim esp 398a d
44 Boswell *Johnson* 124d 126a 127b c 140b 141a 211b c 247c d 299a b 383b 4 0b c
46 Hegel *Ph losophy of Right* part iii par 201-206 68a 69b par 255 79d par 288 97a b par 295 98d 99a par 303 101c 102a par 305 102b par 308 102c 103a par 326 107d 108a additions 127 130 137b d 151 141b c 189 149d / *Ph losophy of History* intro 181d 182a 193b c part i 222a 223c 237b-c 250a c part ii 275b 276a part iii 287d 288b 294c 297b part iv 335a 336c 356c 357a
49 Darwin *Des ent f Man* 324a c 578b c
50 Marx *Cap tal* 95d 96b [fn 2] 164a 180d esp 165a b 165d 166a 171a c 173b 176b d 178c 179c 218c 219d 239d 240c 303d 317c 321b esp 317c 319b 319d 321b 355a 364a passim esp 364a 366a b 368c 369a
50 Marx Engels *Commun st Man festo* 419b [fn 1] 419d-420b 422c-424c 430b c
51 Tolstoy *W a and Peace* bk i 1a 11b bk v 204a 206c bk vii 278c 281a 284a bk ix 347d 350d pa m 384c 388a c bk x 403a 405a bk xi 503a 505a epilogue ii 685d 686a
54 Freud *New Int ducto y Lect* 882c d

5d The conflict of classes within the state

5d(1) The oppos tion of soc al groups the treatment of national racial and re ligious m norities

7 Plato *Law* bk i 641 642b bk iv 678d 679a bk viii 42c d bk xi 774d 775a bk xii 790a d
9 Aristotle *P l* bk iii ch 5 [127 b34 12 8a7] 475a b bk v ch 3 [1303 25 b4] 504d 505a bk v c i 0 [1330 5 33] 534d
14 Plut rch *Theseu* 9c / *R m l s* 21a 27c / *Numa P mp l u* 49a 61d esp 58
22 C u er *P* *Tale* [13 418-620] 392a 395b esp [13 418 424] 392a / *S cond N n s Tale* 463b 471b esp [15 826-16 2] 467b 471b
23 Ho be *Le ath n* part ii 108d 109a
26 S ake peare *Mer hant of Ven c* act sc iii [6-143] 410c-411a
31 S noza *Eth* p rt pro 46 410c
32 M l on *S nnet* xv 66b
35 Locke *T n* 1a 22d
36 Swift *Gul er* p rt i 21b 23a
38 Mon e *Sp of La* k xxiv 206c
38 Rou e *S ial Co ra t* k iv 428b-c
40 G b n *D l and Fall* 12a b 13b-14a 83a b 147a b 179d 180a 206b d 234a esp 207b-211a 229c 232b 290b-291c 348d 361a c esp 348d 349c 352c 354d 356b-d 383a b 390c 391d 607b 608a 61 a b 622b d 638d 639a 643c d
41 Gibbon *Decline and Fall* 138d 285d 288a 404d 480d 481a
43 Constitution of the U S article i sect 9 [260 266] 13d article vi [597-599] 16d amend ents i 17a xv 19b
43 Federalist number 42 137b c number 52 165c number 54 170a 172b number 57 177b
43 Mill *L berty* 270c 2 1a 278a 282a 30 d 312a passim / *Rep esentative Government* 366c d 424c 428a / *Util itarian sm* 475b-476a
46 Hegel *Philosophy of Right* part iii par 2 0 86d 87b [fn 1] / *Phil sophy of Hi tory* intro 172d 173a part ii 276d 277a par iii 287d 288b
54 Freud *W a and Death* 755d 756a / *Civiliza t on and Its Discontents* 788c

5d(2) The clash of economic interests and political factions the class war

5 Euripides *Suppl ants* [229-245] 260b-c
6 Herodotus *Hi to y* bk vi 202c 203b bk vii 243b-c
6 Thucydides *Pelopann s an W a* bk iii 423a c 434c-438c esp 436d 437d bk i 459a c 463a 469b bk v 482d-483a 502d 504a b bk vi 520a d bk viii 564a 593 c
7 Plato *Republ c* bk iv 343c d bk viii 405c 406b / *Laws* bk v 695a c
9 Ar stotle *Pol t* bk ii ch 7 461d 463c passim bk iii ch 10 [1281 11 29] 478d-479a bk iv ch 3 4 488d-492d ch 11 12 495b-497b bk v c i 3 8 503d 511c c 19 [1309b14 13 0 11] 511d 512b bk vi c i 7 [1321a5 2] 524c 525a / *Athen an C n t tution* ch 1 4 553a 572a passim esp ch 2-6 553a 555c ch 29-41 566b 572a
14 Plutarch *S lon* 68d 71c 75c 76d / *Cor o anu* 176b 177b 179c 184c / *Ag s* 648b d 656d / *Cleomenes* 657a 663c / *Tiber s G a chus* 671b d 681a c / *Caius G acch s* 681b d 689a c / *Cicero* 708a 713b
15 Ta tus *Annals* bk vi 97b / *H stories* bk ii 224d 225a
21 Dante *D v ne Com dy* hell, vi [58-75] 9 x [34-93] 14a-c xxviii 41b-43a purgatory v [58 151] 61b 62c
23 M c iavelli *Prince* ch ix 14c-d
23 H bbe *Lev athan* part ii 121b-122b
26 S kespeare *2nd Henry VI* act iv 56a-64d
27 Shake e re *Cor olanus* act i sc i 351a 354d / *Perel s* act ii sc i [30-56] 427 -d
36 Swift *Gul er* part i 21b-23a part ii 60 80a b part iv 154b 155b
38 Rou seau *P litical Ec nomy* 375b-d 381c 382b / *S cial Contract* bk ii 396b-d bk iv 429c 431c

39 SMITH *Wealth of Nations*, BK I, 28a-d; 109d-110d; BK III, 170c-173b; 175b-179a; BK IV, 269d-271a; BK V, 309a-311c esp 309a; 420b-421a
40 GIBBON *Decline and Fall*, 144 d
41 GIBBON *Decline and Fall*, 570d-572d passim; 574b-582; 588a-589a; 594b-c
43 FEDERALIST: NUMBER 10, 49c-53a; NUMBER 51, 164a-165; NUMBER 60, 185b-186; NUMBER 85, 256b-c
43 MILL *Liberty*, 289c-290a; 309b / *Representative Government*, 345c-346a; 366a-370a; 376a-c; 387c-d; 392b-399d passim
46 HEGEL *Philosophy of Right*, PART III, par 236 76a-c; par 304, 102a / *Philosophy of History*, PART I, 250a-c; PART I, 263b-d; 275b-276a; 283 d; PART III, 294c-297b; PART IV, 335a-336c; 356c-357a
50 MARX *Capital*, 6d-7d; 9 c; 63b-; 113c-127c; 146c esp 131a; 134 d; 141b-c, 144a-146c; 275a; 295a; 317b; 355d-368b passim, esp 356c-361d; 366a-368b; 377; 378d
50 MARX-ENGELS *Communist Manifesto*, 415a-434d esp 416 d; 419b-d; 420a; 422c-423b; 424d-425c; 429b-c; 434c-d
51 TOLSTOY *War and Peace*, BK X, 410c-421
54 FREUD *Civilization and Its Discontents*, 787d / *New Introductory Lectures*, 882 d-884a

5e The classless society

50 MARX *Capital*, 9
50 MARX-ENGELS *Communist Manifesto*, 416c-d; 429b-c

6. The ideal or best state: the contrast between the ideal state and the best that is historically real or practicable

6 THUCYDIDES *Peloponnesian War*, BK I, 395d-399a
7 PLATO *Republic*, 295a-441a,c esp BK V-VI, 368c-383a; BK VII, 401 d / *Timaeus*, 442b-443b / *Statesman*, 598b-604b / *Laws*, 640a-799a,c esp BK V, 692c-693a; 696a-b; BK VII, 722d-723; BK IX, 754a-b / *Seventh Letter*, 807b
9 ARISTOTLE *Ethics*, BK V, CH 7 [1135ᵃ2-4] 382d / *Politics*, BK I, CH I [1260ᵇ6]-BK II, CH 9 [1269ᵇ33] 455b-d-465; BK IV, CH 487a-488b; CH 2 [1289ᵃ30-35] 488b; CH 7 [1293ᵃ21] 493a-b; CH 11 495b-496d esp [1295ᵃ25-ᵇ] 495b-c; BK V; VII 1, 527a-548a esp BK VII, CH 4 [1325ᵇ34-39] 530a
12 AURELIUS *Meditations*, BK IX, SECT 29 294a-b
14 PLUTARCH *Lycurgus*, 32-48d esp 48b-c / *Numa Pompilius*, 49a-61d / *Lycurgus-Numa*, 61b-d; 64a-c
23 MACHIAVELLI *Prince*, CH XV, 22b
23 HOBBES *Leviathan*, PART 164 c
25 MONTAIGNE *Essays*, 462-465c
30 BACON *Advancement of Learning*, 94d-95a / *New Atlantis*, 199-214d

3 MILTON *Areopagitica*, 393 b
38 ROUSSEAU *Inequality*, 323a-b / *Social Contract*, BK II, 402b-403a; 405a-c
39 SMITH *Wealth of Nations*, BK IV, 201b-c
42 KANT *Pure Reason*, 114b-d / *Science of Right*, 450b-451d; 455c-458a,c / *Judgement*, 586a-587a
43 FEDERALIST: NUMBER 37-38, 117d-125a passim; NUMBER 41, 132b; NUMBER 65, 200b-c; NUMBER 85, 257a-c; 258d-259a
43 MILL *Representative Government*, 327b-d; 355b esp 341c-d; 344d-345a; 350b-355b; 368c-d; 380; 381a
46 HEGEL *Philosophy of Right*, PART III, par 185, 64b-d; par 273, 90c-92a / *Philosophy of History*, INTRO, 173a-175c; PART I, 251b; PART II, 300c-d
50 MARX-ENGELS *Communist Manifesto*, 432d-433d

6a The political institutions of the ideal state

5 ARISTOPHANES *Ecclesiazusae*, 615a-628d
6 THUCYDIDES *Peloponnesian War*, BK II, 396c-397d
7 PLATO *Republic*, BK II-IV, 316a-350a / *Statesman*, 598b-604b / *Laws*, 640a-799a,c esp BK III, 669d-672b; BK IV, 679c-682c; BK V, 692c-693a; BK VI, 697a-706c; BK VIII, 733b-734; BK IX, 754a-b; BK XII, 784b-799a,c / *Seventh Letter*, 806d-807b
9 ARISTOTLE *Politics*, BK I, CH I [1261ᵃ6-ᵇ28-36] 455b; CH 2 [1261ᵃ24-ᵇ15] 456a-c; CH 5 [1264ᵇ7-25] 459d-460a; CH 6 [1265ᵇ20-1266ᵃ30] 461b-d; CH 8 463c-465b; BK IV, CH 1 495b-496d
14 PLUTARCH *Lycurgus*, 34d-35d; 45-46a
20 AQUINAS *Summa Theologica*, PART I-II, Q 105, A 1 307d-309d
27 SHAKESPEARE *Tempest*, ACT II, SC I [143-184] 532d-533b
37 FIELDING *Tom Jones*, 268c-269b
38 ROUSSEAU *Inequality*, 323a-325b / *Social Contract*, BK III, 410d-411; BK V, 427d
42 KANT *Pure Reason*, 114b-d / *Science of Right*, 450b-451d; 455-456a
43 MILL *Representative Government*, 338a; 341d-350a; 369b-389b
46 HEGEL *Philosophy of Right*, PART II, par 185, 64b-d / *Philosophy of History*, INTRO, 174-175; PART 251b; PART 300 d; PART V, 365c-366a
50 MARX-ENGELS *Communist Manifesto*, 428d

6b The social and economic arrangements of the ideal state

5 ARISTOPHANES *Birds*, 542-563d / *Ecclesiazusae*, 615a-628d / *Plutus*, 629a-642d
7 PLATO *Republic*, BK I, 316-319; BK V, 339b-344a; BK V, 356b-365d; BK VII, 401 d / *Timaeus*, 442d / *Critias*, 481a-485c / *Laws*, 640-799 esp BK I, 645b-652d; BK II, 655b-663d; BK V, 677a-678c; BK V, 691b

(6 *The ideal or best state: the contrast between the ideal state and the best state that is historically real or practicable. 6b The social and economic arrangements of the ideal state.*)

697a BK VI 706d 713c BK VII 717b-728b BK VIII 731d 743a BK XI 771b 784b
9 ARISTOTLE *Politics* BK II CH 1-8 455b d 465b BK VII CH 8 12 532c 536b
14 PLUTARCH *Lycurgus* 36a-47a / *Numa Pompilius* 58a c
25 MONTAIGNE *Essays* 93d 94a
27 SHAKESPEARE *Tempest* ACT II SC I [146-175] 533a b
46 HEGEL *Philosophy of Right* PART III par 299 99c 100b
50 MARX *Capital* 292d 377c 378d
50 MARX ENGELS *Communist Manifesto* 425b 429c esp 428d 429c 432b 433d passim
52 DOSTOEVSKY *Brothers Karamazov* BK VI 158b 159a
54 FREUD *Civilization and Its Discontents* 787d 788b / *New Introductory Lectures* 883d 884c

7 Factors affecting the quality of states

7a Wealth and political welfare

5 ARISTOPHANES *Plutus* 629a 642d esp [415-618] 633d 636d
6 THUCYDIDES *Peloponnesian War* BK I 350b 352c BK I 397b-c BK VI 569d
7 PLATO *Republic* BK II 316c 319a esp 318c 319a BK III IV 339b 344a esp 341c 344a BK V 364c 365d BK VIII 405 408a / *Critias* 485b-c / *Laws* BK III 665b BK IV 677a-c BK V 687d 688a 694a 695c BK VIII 733b d
9 ARISTOTLE *Politics* BK I CH 7 [1267 18 36] 462d-463a BK VII CH 4 [1325^{b}33 1326 4] 530a CH 6 [1327^{a}25 31] 531b c CH 8 532c 533a
14 PLUTARCH *Lycurgus* 36a 37b 47d / *Lycurgus Numa* 62b-c / *Coriolanus* 180b-d / *Aristides Marcus Cato* 291b 292b / *Agis* 649b-c
15 TACITUS *Annals* BK II 31a b BK II 57b-58d
18 AUGUSTINE *City of God* BK I CH 3 33 147b 149a
21 DANTE *Divine Comedy* HELL, VI [1-60] 9c 10 XVI [64-78] 23a b PURGATORY XX [34 96] 83 84a
23 HOBBES *Leviathan* PART IV 267c 268b
36 SWIFT *Gulliver* PART II 73b 76b PART IV 154b 155b
38 MONTESQUIEU *Spirit of Laws* BK V 19a 21d 23a 25c BK VII 44a-48a BK XIII 96c BK XX 146b-147d BK XXI 153 d 154b
38 ROUSSEAU *Inequality* 325d 327c 328a 365c 366b / *Political Economy* 375b d 377b-385a c / *Social Contract* BK II 405c d BK III 411a b 415b-417c 421c d
39 SMITH *Wealth of Nations* BK I 27b 31b 33c 35c
40 GIBBON *Decline and Fall* 22b 23b 88d 89d 456d-457a c 498a 501d 642a-c
43 FEDERALIST NUMBER 21 79b 80a
44 BOSWELL *Johnson* 210d 211b
46 HEGEL *Philosophy of Right* ADDITIONS 143 139d 140a
49 DARWIN *Descent of Man* 324a d
50 MARX *Capital* 292d 319b 321b

7b The importance of the arts and sciences in political life

5 ARISTOPHANES *Acharnians* [497-508] 460d 461a [628-658] 462b d / *Wasps* [1009 1059] 519d 520c / *Birds* [904 1057] 554a 555d / *Frogs* 564a 582a c esp [1008 1098] 576b-577c [1411 1533] 581a 582a c
7 PLATO *Republic* BK II III 320c 339a BK IV 344b 345a BK VII 388a-401d BK X 427c 441a c esp 432d-434c / *Statesman* 604c 608d / *Laws* BK II 653a 663d BK III 675c 676b BK VII 713c 730d
9 ARISTOTLE *Politics* BK VIII 542a 548a c
14 PLUTARCH *Lycurgus* 43b-44b
18 AUGUSTINE *City of God* BK I CH 31 33 147d 149a BK II CH 8 14 153d 157c BK IV CH 26-27 202a 203c / *Christian Doctrine* BK I CH 25 649b d
23 HOBBES *Leviathan* PART II 164c
30 BACON *New Atlantis* 199a 214d esp 210d 214d
35 HUME *Human Understanding* SECT I DIV 5 453a b
36 SWIFT *Gulliver* PART III 104b-107a
38 MONTESQUIEU *Spirit of Laws* BK IV 17b-18d BK XXIII 191a c
38 ROUSSEAU *Inequality* 365d 366b
39 SMITH *Wealth of Nations* BK I 5d 6a BK V 308 309a c 337d 339c 347b d
40 GIBBON *Decline and Fall* 23b-24a c 88d 158d 159a 633b-c
41 GIBBON *Decline and Fall* 298a 300c 326b 328a c esp 327d 328a c 451d 527d 528a c
42 KANT *Fund Prin Metaphysic of Morals* 253c / *Judgement* 586a 587a
43 CONSTITUTION OF THE U.S. ARTICLE I SECT 8 [214 217] 13b
43 FEDERALIST NUMBER 43 139d 140a
44 BOSWELL *Johnson* 180d 181a
46 HEGEL *Philosophy of History* INTRO 185a 186a PART I 217c 218a PART II 277d 278a PART V 346c 348a
54 FREUD *Civilization and Its Discontents* 778a 779d

7c The state's concern with religion and morals: the cultivation of the virtues

6 HERODOTUS *History* BK VII 232d 233d BK IX 294a-c

7d The educational task of the state the trained intelligence of the citizens

(D) II Kings 23 3 / I Kings 3 5 28 4 9 34—(D) III Kings 3 5 28 4-9-34 / II Chronicles 17 12—(D) II Paralipomenon 17 12 / Psalms 72—(D) Psalms 71 / Proverbs 8 15 16 16 1 12 13 17 7 20 26-28 24 5-6 25 2 5 28 15 16 29 2 4 12 4 31 4-5 / Ecclesiastes 10 16-17 / Isaiah 16 5 3 1—(D) Isaias 16 5 3 1 / Jeremiah 23 3-6—(D) Jeremias 23 3-6 / Ezekiel 45 9—(D) Ezechiel 45 9

APOCRYPHA Wisdom of Solomon 1 6 9—(D) OT Book of Wisdom 1 1 6 9 / Ecclesiasticus 10 1 3 41 17-18—(D) OT Ecclesiasticus 10 1 3 41 21 22 / I Maccabees 14—(D) OT I Machabees 14

5 AESCHYLUS *Persians* [623-680] 21c 22a [85 -908] 24b-d

5 SOPHOCLES *Antigone* [16 o] 132c d [633 65] 136c 137d

5 ARISTOPHANES *Knights* 470a-487a c esp [147-22] 471d-472 / *Peace* [60 -692] 532d 534a / *Ecclesiazusae* [173 247] 617a d [441 459] 619d 620a

6 HERODOTUS *History* BK V 164d 165a

6 THUCYDIDES *Peloponnesian War* BK I 383d 384a BK II 404a d BK III 425a-c BK VI 513a 514b

7 PLATO *Gorgias* 285a 292a / *Republic* BK II 319c 320c BK III 339b 340b BK V VI 368 383c / *Timaeus* 442b d / *Statesman* 604c 608d / *Laws* BK IV 679c-682 BK XII 796b-d / *Seventh Letter* 801b-802 804b 80 a 806b-c 807 b

9 ARISTOTLE *Ethics* BK VI CH 5 [1140^{b}4-11] 389b CH 8 [141^{b}23 1142 11] 390d 391a / *Politics* BK I CH [1252^a-17] 445a b CH 13 454 -455a c esp [259 33 1260^a] 454b d BK I CH 5 [1264^{b}7 5] 459d-460a CH 9 [12,0^b 7 127 ^{a}18] 466d-467b CH II [1273^{a}21-^{b} 0] 469d 470b BK I CH 4 473 -475a CH 13 480 -483a CH 17 486c-487a BK IV H 4 [1 91 34 ^{b}7] 490c d K V CH 9 [309 33-^{b}14] 511 d BK VII CH 2 528a 529a CH 9 [13 9 3 17] 533b c CH 4 [332^{b}13 1333 17] 537b 538a

12 AURELIUS *Meditations* BK I 253a 256d K I ECT 5 261a K V SECT 30 276d 277a

14 PLUTARCH *Lycurgus* 45 -46a / *Numa Pompilius* 49 61d esp 60a b / *Pericles* 121 141 c / *Coriolanus* 180d 181b / *Alcibiades Coriolanus* 193a 195 ,c / *Aristides* 262b d 276 esp 263d 267a 273d 275c / *Marcus Cato* 276b d 290d esp 279 282a / *Aristides Marcus Cato* 290b d 292d / *Lysander Sulla* 387d 388a / *Lucullus* 419a b / *Nicias* 423d 430d / *Crassus Nicias* 455b d-457d / *Phocion* 604b d-619d / *Cato the Younger* 620a 648a c / *Cleomenes* 661 d / *Cicero* 706c 717a b / *Dion* 781b d 802a c / *Antony* 829b d

15 TACITUS *Histories* K I 215c

18 AUGUSTINE *City of God* K XIV CH 28 397a-d BK XIX CH 6 521d 522a

21 DANTE *Divine Comedy* HELL, XII [100-139] 17b d XXVI [55 13] 40a-41a PURGATORY VI [58 151] 61b 62c VII [61 136] 63a 64a III [109-139] 65c d X [70-93] 68a b XVI [85 129] 77d 78a XX [34-96] 83 84a P DIS XIII [91 108] 126b c XVIII [70]-XX [78] 134b 137c

23 MACHIAVELLI *Prince* CH XV XVIII 22b 26a

24 RABELAIS *Gargantua and Pantagruel* BK III 132a 133b

25 MONTAIGNE *Essays* 381a 388c 436c-438b 451d-453b

26 SHAKESPEARE *Richard II* ACT II SC I 327 331a ACT III SC IV [9-66] 340c d / *1st Henry IV* ACT I I SC II [39-161] 453b-454c / *2nd Henry IV* ACT IV SC V 494b-496d / *Henry V* ACT I SC I 533a d

27 SHAKESPEARE *Measure for Measure* ACT I C I II 174a 177d ACT III SC II [75 96] 192b / *Macbeth* ACT IV SC III 303b 306b / *Coriolanus* 351a 392a c esp ACT III SC II [1-9] 373 374c ACT IV SC VII [28-57] 384c d

29 CERVANTES *Don Quixote* PART II 331a 336a

30 BACON *Advancement of Learning* 1b 2c 4c 7 20d 25c 94b 95b

32 MILTON *Lord Gen Cromwell* 69a b / *Sir Henry Vane* 69b / *Paradise Lost* BK II [430-456] 120b 121a

35 LOCKE *Civil Government* CH VIII SECT 105 112 48c 51b

36 SWIFT *Gulliver* PART I 28b 29b PART III 112a 113b

38 MONTESQUIEU *Spirit of Laws* BK V 22 b BK VI 40a b BK XXI 170a BK XXVIII 259b BK XXIX 262a b

38 ROUSSEAU *Inequality* 327a / *Social Contract* BK I I 414c d

40 GIBBON *Decline and Fall* 31d 32c 61d 64 passim 74a b 142b c 255b d 257a passim 284a b 338d 344a c esp 338d 339c 343c 344a 430 d 448c-449 534c 577a d

41 GIBBON *Decline and Fall* 67d 68b 103d 104c 504 505 577d 579a

42 KANT *Judgement* 504 b

43 CONSTITUTION OF THE U S ARTICLE I SECT 2 [11 16] 11b SECT 3 [67 72] 12a ARTICLE II SECT I [375 38] 14d

43 FEDERALIST NUMBER 2 32b 33b NUMBER 52 165c NUMBER 57 176d 177a NUMBER 62 188d 189 NUMBER 68 206b c NUMBER 72 217d NUMBER 75 223 d

43 MILL *Representative Government* 336c 338c passim 341d 344d 353b 354b 363b 366a 398d 399d 406d 407d 408d

44 BOSWELL *Johnson* 178a b 374a-c

46 HEGEL *Philosophy of Right* PART II pa 92 98a / *Philosophy of History* PART 275d 276d 281c 282d PART IV 360b c 361d 362a 366b 368b

51 TOLSTOY *War and Peace* K I 9c 10d BK X 465c 467 BK XIV 611 -c EPILOGUE I 645a 646c

(8 *The offices of state: the statesman, king, or prince.*)

8c The education or training of the statesman or prince

7 Plato: *Republic*, BK II-III, 320c-341d; BK V, 366a-c; BK VI-VII, 383b-401d / *Timaeus*, 442c-d / *Laws*, BK III, 672d-676b; BK XII, 794a-799a,c / *Seventh Letter*, 801c-802d

9 Aristotle: *Ethics*, BK X, CH 9 [1180b29-1181b25] 435d-436a,c / *Politics*, BK III, CH 4 [12 , 14 b33] 474a-475a; CH 18 [1288 34 b3] 487a,c; BK VII, CH 14 [1332b13-1333 17] 537b-538a; BK VIII, CH 4 [1338b25-38] 544a-b

12 Aurelius: *Meditations*, BK I, 253a-256d

14 Plutarch: *Pericles*, 122d-123c / *Alcibiades*, 156c-158b / *Agesilaus*, 480b-d-481a / *Alexander*, 542d-544a / *Cato the Younger*, 625b-626a / *Dion*, 781b-d-788b

15 Tacitus: *Annals*, BK II, 34c-d; BK XII, 111d; BK XIII, 125d-126a; BK XIV, 153d-155a / *Histories*, BK IV, 267c

23 Machiavelli: *Prince*, 1a-37d esp CH XIV-XIX, 21b-30a

23 Hobbes: *Leviathan*, INTRO, 47b-d; PART II, 164a,c

24 Rabelais: *Gargantua and Pantagruel*, BK I, 18b-19d, 26d-30c

25 Montaigne: *Essays*, 437b-c

26 Shakespeare: *1st Henry IV*, ACT I, SC II [119-240] 436c-437d; ACT III, SC II [93-161] 453d-454c / *Henry V*, ACT I, SC I [22-68] 533b-c

29 Cervantes: *Don Quixote*, PART II, 332c-336a, 362a-c

30 Bacon: *Advancement of Learning*, 4c-7c, 23a-b

36 Swift: *Gulliver*, PART II, 73a-76b

38 Rousseau: *Social Contract*, BK III, 414b

40 Gibbon: *Decline and Fall*, 32a, 62a-c, 86c, 245b-c, 260a-b, 275c-276a, 284a-c, 430a, 534a-c, 669b

41 Gibbon: *Decline and Fall*, 15b-c, 508c-509d

43 Federalist: NUMBER 27, 95c-d; NUMBER 35, 114b-c; NUMBER 53, 168b-169d passim; NUMBER 56, 175d-176d; NUMBER 62, 190b-d

43 Mill: *Representative Government*, 356b-359a, 407d-408d, 415a-417 passim

46 Hegel: *Philosophy of Right*, PART III, par 296, 99a-b; ADDITIONS, 169, 145d; 171, 146b-c / *Philosophy of History*, INTRO, 155b-d; PART I, 212d-213d, 243b-c; PART II, 281d; PART V, 368b

8d Statecraft: the art or science of governing; political prudence

5 Aeschylus: *Persians* [6 3-68] 21c-22a [852-908] 24b-d

5 Aristophanes: *Knights* 4 0a-487a,c esp [47 222] 471d-472 / *Lysistrata* 583a-599 esp [456-5 0] 589-590d / *Ecclesiazusae* 615a-628d esp [3 24] 617 d

7 Plato: *Euthydemus*, 75c-76b / *Meno*, 188b-190a,c / *Republic*, BK 383b-401d /

Statesman, 580a-608d esp 585c-d, 604-608 / *Laws*, BK IV, 679a-c

9 Aristotle: *Ethics*, BK I, CH 1-2 339a-d; BK VI, CH 7 [1141 0-33] 390a-b; CH 8 [1141b23-28] 390d / *Politics*, BK II, CH 12 4 0b-471d; BK III, CH 11 [1281 39-1282 41] 479b-480b; BK IV, CH 1 487a-488b

12 Aurelius: *Meditations*, BK I, SECT 14 254b-c

14 Plutarch: *Romulus-Theseus*, 30c-d / *Poplicola*, 80d-82a / *Poplicola-Solon*, 87b-d / *Camillus*, 102b-d / *Pericles*, 121a-141a,c esp 137b-138b / *Fabius*, 143b-d, 145d-146a / *Alcibiades*, 155b-d-174d passim, esp 167c-168a / *Aristides*, 262b-d-276a,c esp 263d-267a, 273d-275c / *Agesilaus*, 482a-c / *Phocion*, 604b-d-605d / *Cato the Younger*, 625b-627b / *Agis*, 648b-d-649b / *Caius and Tiberius Gracchus-Agis and Cleomenes*, 689b-d-691a,c

15 Tacitus: *Annals*, BK IV, 72a-b

18 Augustine: *City of God*, BK V, CH 12, 217d-218a

20 Aquinas: *Summa Theologica*, PART I-II, Q 104, A 4, ANS 306d-307c

23 Machiavelli: *Prince*, 1a-37d

23 Hobbes: *Leviathan*, PART II, 112d, 128d-129b, 158c-d, 164c

26 Shakespeare: *Richard II*, ACT III, SC IV [9-66] 340c-d

30 Bacon: *Advancement of Learning*, 4c-7c, 81d-95b passim

35 Locke: *Toleration*, 9b

36 Swift: *Gulliver*, PART II, 78a-b; PART III, 112a-115b; PART IV, 157a-158a

38 Montesquieu: *Spirit of Laws*, BK VI, 40a-43c-d; BK XII, 93c-95b; BK XIX, 137c-139; BK XXIX, 262a-b

38 Rousseau: *Social Contract*, BK III, 413a

40 Gibbon: *Decline and Fall*, 48a, 142c-144a, 155a-d, 157c, 284a-c, 288b-289a

41 Gibbon: *Decline and Fall*, 176c-177c

43 Mill: *Representative Government*, 331b-c, 356b-359a

46 Hegel: *Philosophy of History*, PART II, 275d-276a; PART IV, 361d-362a

51 Tolstoy: *War and Peace*, BK II, 65d-66d; BK I 238, 243d, 260a-262a

53 James: *Psychology*, 201a

8d(1) The employment of the military arts

5 Aeschylus: *Persians* [652-680] 21d-22a [852-906] 24b-26d / *Seven Against Thebes* [1 -] 27a-28a

5 Euripides: *Suppliants* [723-730] 264d

6 Herodotus: *History*, BK I, 6a-b, 41c-42b, 46a-48a; BK IV, 141b-c; BK VII, 225a-226b, 244a-245a, 257d-258d; BK VIII, 260a-28 d passim

6 Thucydides: *Peloponnesian War*, BK I, 369a-370d, 371b-372d, 384d-386b; BK II, 389d-391b; BK VI, 514d-516, 517d-5 0d, 528b-c; BK VIII, 564a-593 c passim

7 PLATO *Republic* BK II 319a c BK V 367b 368c / *Sta esman* 605a d
9 ARISTOTLE *Ethics* BK X CH 7 [1177b2 5] 432a-c / *Politics* BK II CH 9 [1271 38 4] 467c BK IV CH 4 [1291a7-33] 490b-c K V CH 9 [309 33 b8] 511c d BK VII CH [1324 24 1325 15] 528b-529a CH 5 [1326b38 1327a7] 531a CH 9 [329 3 39] 533b d CH 14 [1333 29- 334 11] 538 d
14 PLUTARCH *Themistocle* 88a 102a c / *Peri le* 130d 141a c / *Fab us* 141a 154a / *Aemili is Paulus* 214d / *Cat is Ma tus* 332b d 354a c / *Cimon* 89b d 399d / *Lucullus* 400a-421 c / *Pompey* 499a 538a c / *Alexander* 540b d 576d / *Caesar* 577a 604d / *Phocion* 607b d / *A tony* 748a 779d
23 MACHIAVELLI *Pr ce* CH III VIII 3 14c passim CH X 16a d CH XII XIV 17d 22a CH XX 30a 31c CH XXVI 37a c
23 HOBBES *Levi tha* PART II 159a-c
25 MONT I NE *Ess ys* 327d 329d
36 SWIFT *Gulliver* PART II 77a 78b
38 MONTESQUI U *Spirit of Laws* K V 31d 32b BK X 65d 68a BK XI 74b d BK XI I 100d 101a
38 R US EAU *P litical Economy* 380a d
39 SMITH *W alth of Nations* BK V 305c 309 c
40 GIBBON *Decl ne and Fall* 4b 5c 42b d-43b 47c d 50b 56a 63a 64b 86a d 118d 119a 168b 171b esp 170c d 245d 248d 284a-c 365b 378d esp 373c 374a 563 567a 639a
41 GI BON *Decline and Fall* 126d 131d esp 128a 311d 312a 321b 323 509 d
42 KANT *Science f Right* 453d 454 / *Judg m nt* 504a b
43 CONS ITUT ON OF THE U S ARTICL II S CT [409-413] 15a
43 FE ERALIST NUMBER 20 76b d NUM E 29 99b 100a NU R 74 221 d
46 HEGEL *Philo ophy of History* PART II 281d 282d PART IV 359a b 366b
51 T LSTOY *War a d Pea e* BK I 81 93d BK III 1 8d 144c 146d 153d 155a K V 209a-c K IX 342a 355 BK X 389 391c 404a b 430b-432c 444 -450a BK X 533a 537b esp 535d 537b BK X II 563a 575a BK XIV 610d 611a BK XV 626d 630a

8d(2) The occa ons and uses of rh tor c

4 H MER *Il d* BK II [78 393] 12d 13d
5 EURIPID S *S ppl a ts* [399-425] 261d 262a / *O estes* [852-956] 402d-403d
5 AR STOP AN *P ac* [60 -656] 532d 533c
6 HERODOTU *H story* BK V 180c d K V II 264a c
6 THUCYD DE *P l ponnes War*, BK I 384c 386c BK II 395d 399a 402b-404a K I 425 d 427a-c BK V 511b 516 517d 520d BK VII 559d 560b
7 PLATO *Ph dr* 129d 130c / *Gorg a* 288b-292b / *Statesman* 604d 605a / *Laws* BK IV 684c 686b BK X 760a 761a
9 ARISTOTLE *Eth cs* BK X CH 9 [1180b 8 1181 18] 435d 436a / *Pol t cs* BK IV CH 4 [1292 4-38] 491b d passim BK V CH 5 [1305a7-15] 506d / *Rh toric* BK I CH I [1354b23-34] 593d 594a CH 3 8 598b 608c BK II CH I [377b14-1378 19] 622b d 623a BK II CH 16 [1417b13 17] 671d CH 17 [1417b35 1418b23] 672b 673b
14 PLUTARCH *Pericles* 129b 130b / *Alcibiad s* 159a b / *Ph cion* 605a d / *Cato the Younger* 621c / *Demosthenes* 691b d 704a / *C cero* 704a 723d / *Demosthenes Cicero* 724a 725d
15 TA U *Annals* K I 10d 11b 12 13d K X I 126a b / *Hi tories* BK IV 290a d
23 HOBBES *Leviathan* PART II 106a b 127d 128b 128d 129b d 157c d 158d 159a
25 MONTAIGN *Essays* 147b 148a
26 SHAKE PEARE *Julius Caesar* ACT I I SC I [226-253] 582d 583a SC II 583 586c
27 SHAK S EARE *Coriolanus* ACT III SC II [51-92] 374
30 BACON *Adv ncement of Learn g* 1d 2b 23a 26a
32 MILTON *Areopag tica* 383a
36 STE NE *Tr st am Shandy* 290a b
38 MONTESQUIEU *Sp rit f Laws* K XII 89c 90c BK XXIX 266b
40 G ON *De l n and Fall* 64a 284b 343a b 384d 385b
43 FEDERALIST NUM I 9d 30c NUM E 26 93d 94a NUMBER 58 181b c
43 MILL *Rep es ntati Governme t* 361b 362
44 BOSWELL *J hnso* 374a d
46 HEGEL *Pl il ophy of History* INTRO 153d 154a P RT 273d 274a

8d(3) The role or function of experts n the serv ce of the st te

7 PLATO *Protago a* 43b d / *Go g as* 287d 288a / *Republ c* BK II 316 319c BK V 369c 370a BK VI 373c 375b BK VII 390b 391b / *St t sman* 598b 608d
9 AR TOTLE *P litics* K III CH II [128 39-1282 41] 479b-480b BK V CH 9 [1309a33 b8] 511c d
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Chapter 91 TEMPERANCE

INTRODUCTION

MOST outstanding figures in history most heroes of legend or fiction are men of strong passions of ambition and of pride They are driven by desires which tend to be limitless Few exemplify moderation Few stop short of excess in anger or love or in their striving for power and pleasure They may curb their appetites in one direction only to indulge them without rein in another They do not follow in all things the counsels of temperance expressed by the ancient maxim Nothing overmuch

Achilles is not temperate in his wrath nor does Odysseus for all his craft and cunning exhibit self control when his vanity or curiosity is at stake The tragedies of Euripides more perhaps than those of Sophocles and Aeschylus embody the hubris or pride which is common to all tragic figures in some particular form of intemperance such as the boundless hate of Medea or the abstemiousness of Hippolytus One play especially *Bacchantes* takes intemperance for its central theme and sets the disciples of the dionysiac spirit in mortal conflict with the puritans and their prohibitions Comedy as well as tragedy flo s from intemperance as when we smile at the exaggerated sentimentality of the romantic lovers described by Cervantes and Fielding Chaucer and Shakespeare or find merr ment n the indulgences of Sir John Falstaff Pantagruel and Panurge or Tristram Shandy

The great books of history add their evidence They make fict on seem pale by comparison with the excesses of cruelty and sensuality which if they ere not presented as fact might be dismissed as unimaginable Page after page of Tacitus and Gibbon oft n describe in an unrelieved sequence human debauchery brutalities and re elnes ingeniou ly designed to reach some new e treme in order to procure through no elty sati faction for appetites already over indulged and weary of familiar pleasures

Nor is the historian s panorama of intemperance limited to the uncontrolled indulgences of the few—the oriental despots described by Herodotus or the Caesars and their retinues in the imperial court of Rome Armies in the field and the mob formations of civilian life are depicted in wanton and riotous behavior Whole peoples are described as being given to luxurious living or as wanting in standards of public decency The few exceptions in antiquity such as Spartan rigor or the chastity if not the sobriety of the primitive Germans only accentuate by contrast the immoderate tenor of life in most ancient societies

DARWIN SEEMS TO think that a much greater degree of self control characterizes modern life both public and private though his opinion on this score may give undue weight to the conventions so much insisted upon in England under Queen Victoria Temperance according to him is a virtue peculiar to civilized life The greatest intemperance he writes is no reproach with savages

Darwin places temperance along with prudence among the so called self regarding virtues which do not obviously though they may really affect the welfare of the tribe and which have never been esteemed by savages though now highly appreciated by civilized nations That Darwin has modern society in mind when he speaks of civilized nations may be inferred from his remarks about the sensuality of the Greeks and Romans This seems to be confirmed by his statement that the hatred of indecency which is so valuable an aid to chastity is a modern virtue appertaining exclusively to civilized life

What may be noted here and questioned—

in addition to the validity of Darwin s comparison of modern and ancient culture—is the tendency to identify temperance with chastity or at least with restraint if not abstinence in the sphere of the sexual impulses In our day the general notion of virtue is often restricted to the virtue of chastity as when we use the words virtuous woman to signify one who is chaste or woman of easy virtue to signify one who is not But spectacles of gluttony and drunkenness of avarice or greed are ever present to remind us that man can be intemperate in more ways than one Darwin s implication of progress from licentious to moderate living may have less justification when we consider all the forms which intemperance can take

Darwin furthermore seems to distinguish between courage and temperance in relation to the level or degree of civilization Unlike temperance courage he thinks is demanded by primitive as well as civilized life because it concerns the welfare of society as much as the well being of the individual Since no man can be useful or faithful to his tribe without courage this quality he says has universally been placed in the highest rank On the point of this comparison between the two virtues Freud appears to disagree Though he too considers temperance or self control largely in the sphere of the sexual instincts he seems to think that any form of organized social life whether regarded as primitive or civilized exacts certain restraints from the individual for the sake of the common good Temperance no less than courage serves the tribe or the state

Civilization has been built up Freud writes under the pressure of the struggle for existence by sacrifices in gratification of the primitive impulses and that is to a great extent for ever being re created as each individual successively joining the community repeats the sacrifice of his instinctive pleasures for the common good The sexual are amongst the most important of the instinctive forces thus utilized they are in this way sublimated that is to say their energy is turned aside from its sexual goal and diverted towards other ends no longer sexual and socially more valuable.

Society may depend on the temperance of its members without being able to exact temperance from them Writers like J S Mill for example question the right of society to enforce temperance upon its members by the enactment of sumptuary laws especially with regard to food and drink. The supposition seems to be that the intemperate man injures only himself—to do which is the prerogative of his personal liberty—whereas the unjust man injures others We shall return to the consideration of this issue later after we have examined the nature of temperance and its relation to other virtues such as justice courage and wisdom or prudence

IF THE POETS AND the historians describe the prevalence and the range of man s intemperance the moralists tend to be unanimous in recommending self control or moderation There is hardly any variety of moral theory—whether developed in terms of law and duty or in terms of happiness and virtue whether appealing to *a priori* principles or to criteria of utility empirically applied—which does not recommend the discipline of desire by reason and which does not condemn sensuality self indulgence unchecked appetites or passions run wild

The word temperance itself is not always used nor is the technical notion of virtue always implied by those who advocate what Milton calls the rule of not too much by temperance taught For some writers on the other hand temperance and virtue are almost identical They think the essence of temperance is moderation and the virtuous life is the reasonable one It is one in which reason moderates the passions and limits the pursuit of pleasure

For example Freud s theory of the reality principle seems to reflect traditional notions of temperance A person dominated by the pleasure principle is infantile in character The transition from the pleasure principle to the reality principle he points out is one of the most important advances in the development of the ego When the ego learns that it must inevitably go without immediate satisfaction postpone gratification learn to endure a degree of pain and altogether renounce certain sources of pleasure it becomes reasonable is no longer controlled by the pleasure-principle but follows the reality principle which seeks a delayed and diminished pleasure one which is assured by its realization of fact its relation to reality

So too Spinoza s doctrine that human bondage consists in being subject to the tyranny of the passions whereas human freedom stems from the rule of reason can be read as an apostrophe to temperance Descartes maxim to try always to conquer myself rather than fortune and to alter my desires rather than change the order of the world is still another expression of the insight that peace of mind comes from self control Though Kant does not think temperance deserves to be called good without qualification he does affirm that moderation in the affections and passions self control and calm deliberation are not only good in many respects but even seem to constitute part of the intrinsic worth of the person

It is Montaigne who magnifies temperance beyond virtue and makes it the measure of the sound pursuit of every sort of good even virtue itself Without temperance he writes in his essay Of Moderation we can corrupt things that in themselves are laudable and good we may grasp virtue so that it becomes vicious if we embrace it too stringently and with too violent a desire Montaigne opposes those who say there is never any excess in virtue On the contrary he thinks that a man may both be too much in love with virtue and be excessive in a just action I love temperate and moderate natures An immoderate zeal even to that which is good though it does not offend astonishes me and puts me to study what name to give it

As with virtue so with wisdom or philosophy He quotes Holy Writ to the effect that we should be soberly wise not try to be wiser than befits our natures We should not dive into philosophy beyond the limits of profit taken moderately it is pleasant and useful There is in short no pleasure so just and lawful where intemperance and excess are not to be condemned

Montaigne sees temperance as augmenting the pleasure of life rather than diminishing it He subscribes to Plato s statement in the *Laws* that the temperate life is in all things gentle having gentle pains and gentle pleasures whereas the intemperate life has violent pains and pleasures, and vehement and stinging desires and loves utterly insane and in the temperate life the pleasures exceed the pains but in the intemperate life the pains exceed the pleasures in greatness and number and frequency To overlook this Montaigne elsewhere suggests is to suppose that the regimen which stops the toper before he has drunk himself drunk the glutton before he has eaten to a surfeit and the lecher before he has got the pox, is an enemy to pleasure Yet in his love of temperate and moderate natures Montaigne repeatedly counsels us to avoid being overzealous even about temperance itself The maxim Nothing overmuch applies to virtue as well as to the pleasure-seeking that virtue tries to control

Considered in terms of Aristotle s theory that all the moral virtues consist in a mean between excess and defect Montaigne seems to be identifying moderation with the observance of the mean so that moderation becomes an aspect of every virtue including temperance itself as one virtue among others Thus the courageous man is one who fears neither too much nor too little but is moderate with respect to peril and pain. Accordingly a man cannot be too courageous, but only too fearless and so rash or foolhardy

But it may be supposed that if moderation enters into all the virtues such virtues as temperance and courage are not distinct Holding them to be distinct in regard to the objects with which they deal Aquinas admits that each of the major virtues can be taken to denote certain general conditions of virtue so that in a sense they overflow into one another He defines temperance as a disposition of the soul moderating any passions or acts so as to keep them within bounds and fortitude as a disposition whereby the soul is strengthened for that which is in accord with reason against any assaults of the passions or the toil involved in any work to be done So conceived Aquinas thinks it is possible to see how temperance and fortitude are in some sense one

The man who can curb his desires for the pleasures of touch is more able to check his daring in the face of danger and in this sense fortitude is said to be temperate The man who is able to stand firm against the dangers of death is more able to remain firm against the onslaught of pleasures and so temperance can be

said to be brave Thus temperance enters into other virtues insofar as it leads men to observe the mean in all things just as fortitude enters into temperance because it strengthens men against the enticements of pleasure as well as against the fear of pain

The general theory of virtue in terms of which the several virtues are distinguished and their connections traced is discussed in the chapter on VIRTUE AND VICE and the special virtues to which temperance is related are considered in the chapters on COURAGE JUSTICE and PRUDENCE. Here we must be concerned to observe how the general conception of virtue is exemplified in the definitions of temperance given by those who like Plato Aristotle and Aquinas consider it to be not the whole of virtue but one of the major virtues and distinct from the others

THOUGH PLATO AND Aristotle do not conceive virtue in the same way and though they diverge in analyzing particular virtues such as justice or wisdom and in describing how particular virtues are related to one another they nevertheless seem to concur on a number of points in their treatment of temperance

In the *Gorgias* Callicles asserts that only those who are unable to satisfy their desire for pleasures praise temperance and call intemperance base But he asks what could be more truly base or evil than temperance to a man who might freely be enjoying every good and has no one to stand in his way? And he concludes by saying that luxury and intemperance and license if they be provided with means are virtue and happiness

In reply Socrates tries to persuade Callicles that instead of the intemperate and insatiate life one should choose that which is orderly and sufficient and has a due provision for daily needs He compares the intemperate man to a vessel full of holes because it can never be satisfied By analogy with the sound and the leaky vessel Socrates describes the temperate man as able to satisfy his limited desires whereas the intemperate man of boundless desire can never pause in his search for pleasure If he pauses for a moment he is in an agony of pain Such are the respective lives he adds and now would you say that the life of the intemperate is happier than that of the temperate?

Callicles claims to be unconvinced but later Socrates gets him to admit that in all things—in a house or a ship in the body or the soul—order is good and disorder evil He then proceeds to point out that order is the principle of health in the body and of temperance in the soul It is in these terms that Socrates defines temperance in the *Republic* as the ordering or controlling of certain pleasures and desires In the human soul he explains there is a better and also a worse principle and when the better has the worse under control then a man is said to be master of himself

The words temperance and self mastery are almost interchangeable both signify the rule of the better part over the worse Just as the courageous man is one whose spirit retains in pleasure and in pain the commands of reason about what he ought or ought not to fear so the temperate man is one in whom the ruling principle of reason and the two subject ones of spirit and desire are equally agreed that reason ought to rule

In somewhat similar terms Aristotle defines temperance and courage by reference to pleasure and pain The man who abstains from bodily pleasures and delights in this very fact is temperate while the man who is annoyed at it is self indulgent and he who stands his ground against things that are terrible and delights in this or at least is not pained is brave while the man who is pained is a coward Like Plato Aristotle makes the rational principle the source of these virtues It is reason or more precisely one of reason s virtues prudence which determines the mean between excess and defect with regard to pleasure and pain or fear anger and the other passions

Like Freud Aristotle regards self indulgence as infantile or childish Children live at the beck and call of appetite and it is in them that the desire for what is pleasant is strongest When such desire is not regulated by reason it will go to great lengths for in an irrational being the desire for pleasure is insatiable even if it tries every source of gratification Where Freud speaks of the pleasure principle submitting to the reality principle Aristotle says as the child should live according to the direction of his tutor so the appetitive element

should live according to the rational principle The appetitive element in a temperate man should harmonize with the rational principle

According to Aristotle temperance is concerned not with all pleasures but with the kind of pleasures that other animals share in which therefore appear slavish and brutish these are touch and taste Self indulgence is a matter of reproach because it attaches to us not as men but as animals To delight in such things and to love them above all others is brutish

The endurance of pain which is central to the nature of courage enters into temperance incidentally The self indulgent man is pained more than he ought at not getting pleasant things whereas the temperate man is not pained at the absence of what is pleasant or at his abstinence from it But total abstinence is not temperance any more than over indulgence is The temperate man occupies a middle position between those who have an insatiable craving for pleasure and those who fall short with regard to pleasures and delight in them less than they should Such insensibility Aristotle declares is not human either

When reason curbs the desire for bodily pleasures it is not to lessen sensual pleasure in the opinion of Aquinas but to prevent the force of concupiscence from cleaving to it immoderately By *immoderately* he explains I mean going beyond the bounds of reason as a sober person does not take less pleasure in food eaten in moderation than the glutton but his concupiscence lingers less in such pleasures Though Aquinas agrees with Aristotle in defining temperance strictly as moderation with respect to the pleasures of taste and touch such as the pleasures of the table or of sex he associates with temperance those virtues which involve moderation with respect to other pleasures.

For example there is liberality with respect to money as an object of love or pleasure Neither the spendthrift nor the miser is temperate Friendliness or affability and gentleness represent temperance in the relation of a man to the pleasures of fellowship and the virtue which Aristotle calls *eutrapelia* is similarly classified by Aquinas as being a moderate indulgence in the pleasures of recreation of sport and games the opposites of which in excess and defect can be called buffoonery and boorishness Even the pleasures of learning can be pursued intemperately so that an undue craving for knowledge—beyond the proper limits and for the wrong reasons—is according to Aquinas the vice of curiosity

THE NOTIONS OF ABSTINENCE and continence seem to be closely related to the idea of temperance The words are often used interchangeably But as we have seen according to the theory of virtue as a mean between extremes of excess and defect temperance calls for a moderate indulgence in pleasures not abstinence from them entirely This raises the question whether the asceticism of the religious life violates the rule of reason by a kind of immoderate withdrawal from ordinary pleasures What to the psychoanalyst may look like pathological self denial or to the philosopher like a violation of nature takes in the eyes of the Christian theologian the form of heroic temperance a supernatural perfection of the virtue

When in the religious life a man does his utmost to strive onward to divine things, then according to Aquinas in those who are tending towards the divine similitude temperance is a *perfecting* virtue So far as nature allows it neglects the needs of the body In those who have already attained to the divine likeness the *perfect* virture of temperance is one which knows no earthly desires.

Since use of sexual union hinders the mind from giving itself wholly to the service of God and since the use of venery withdraws the mind from that perfect intentness on tending to God the perpetual continence of the celibate life as well as the voluntary poverty of the monastic life seem to Aquinas requisite for religious perfection

Augustine in his *Confessions* tells of the time when I thought I should be impossibly miserable if I had to forego the embraces of a woman and I did not think of Your mercy as a healing medicine for that weakness because I had never tried it I thought that continency was a matter of our own strength and I knew that I had not the strength for in my utter foolishness I did not know the word of Your Scripture that none can be continent unless you give it

Though he separated from his mistress in order to prepare for marriage he discovered that it was not really marriage that I wanted I was simply a slave to lust He recounts the struggles wh ch finally enabled him to turn in the other direction and to see the austere beauty of Continence serene and indeed joy ous and with her he adds I saw such hosts of young men and women gray widows and women grown old in virginity and in them all Continence herself not barren but the fruitful mother of children her joys by You Lord her Spouse

But there is another meaning of continence accord ng to which it is condemned by the philosopher who conceives temperance as a nat ural virtue The reason for Aristotle s con demnation of continence differs from the reason he gives for his disapproval of abstinence Abstinence—at least on the natural plane—is an im moderate denial of pleasure Continence is op posed to temperance because it merely repre sents reason s inhibition of the act prompted by a licentious desire for pleasure It is not an habitual moderation of desire itself Aristotle s emphasis on habit therefore leads him to insist upon the distinction between temperance and continence

We group together the incontinent and the self indulgent the continent and the temperate man Aristotle writes because they are con cerned somehow with the same pleasures and pain but though they are concerned with the same objects they are not similarly related to them The difference lies in the fact that a man acts continently in a particular situation when his reason is able to overcome an im moderate desire for pleasure and incontinently when the force of his desire brushes reason as de whereas a man not only acts temperately but is temperate in character when his desires are themselves habitually moderated to be in accord with reason

The temperate man therefore has no need for continence Nor is the incontinent man to be confused with the intemperate for the latter is not convinced that his desires are inordinate The continent man is one who when acting against reason kno s that he is do ng so Though both the continent and the temperate man do nothing contrary to the rule of reason for the sake of bodily pleasures the one accord ng to Aristotle has bad appetites the other is free from them

THE CONTINENT MAN is not the only one who gives the appearance of temperance without being really temperate in character Some men says Aristotle are moderate by nature— from the very moment of birth fitted for self con trol What appears to be temperance in them therefore is not in his opinion a virtuous habit acquired by good acts but simply a natural capacity to control their desires or a tempera mental constitution which happens not to be ridden by very strong desires They do not de serve to be praised for their apparent self con trol neither do those who manage to be moder ate about certain pleasures but give themselves free rein with respect to other desires The miser who limits his bodily comforts in order to amass a pile of gold is hardly temperate

Gibbon writes of the Emperor Julian that he seldom recollected the fundamental maxim of Aristotle that true virtue is placed at an equal distance between the opposite vices Julian s lack of temperance appears however not mere ly in the opposite extreme to which he went to express his contempt for luxury sleeping on the ground and renouncing the decencies of dress and cleanliness Though genuinely moderate in some things such as his diet he went to excess in others overdoing his preoccupation with affairs of state and working incessantly for long hours day after day He considered every mo ment as lost that was not devoted to the ad vantage of the public or the improvement of his own mind By this avarice of time Gibbon observes he seemed to protract the short du ration of his reign

Temperance in a particular respect is some times praised as a virtue relative to a specific and limited goal Considering the wealth of na tions Adam Smith looks upon prodigality as a major vice and regards parsimony as an indis pensable virtue Capitals are increased by par simony he writes and diminished by prodi gality and misconduct Parsimony and not industry is the immed ate cause of the increase of capital By what a frugal man annually saves he not only affo ds m intenance to an additional number of product ve hands for th--

or the ensuing year but like the founder of a public workhouse he establishes as it were a perpetual fund for the maintenance of an equal number in all times to come

Capital funds are perverted by the prodigal By not confining his expenses within his income Smith declares he encroaches upon his capital By diminishing the funds designed for the employment of productive labor he necessarily diminishes the quantity of that labor which adds a value to the subject upon which it is bestowed and consequently the value of the annual produce of the land and labour of the whole country If the prodigality of some was not compensated by the frugality of others the conduct of every prodigal by feeding the idle with the bread of the industrious tends not only to beggar himself but to impoverish his country

From the point of view of augmenting wealth Smith may be right in calling every prodigal a public enemy and every frugal man a public benefactor Marx however raises the question whether thrift or parsimony represents moral virtue in the capitalist himself He mocks the classical or what he calls the vulgar economic theory which tends to identify capital with abstinence and taking Adam Smith s statement that industry furnishes the material which saving accumulates he interprets *saving* to mean the *reconversion of the greatest possible portion of surplus value or surplus product into capital*

For Marx the question is in addition to being economic a moral and psychological one He describes the capitalist as suffering from a Faustian conflict between the passion for accumulation and the desire for enjoyment His parsimony or abstinence from certain pleasures hardly signifies genuine temperance for according to Marx the capitalist is like the hoarder who makes a sacrifice of the lusts of the flesh to his gold fetish Elsewhere he says that the boundless greed after riches is common to the capitalist and the miser but while the miser is merely a capitalist gone mad the capitalist is a rational miser

In Marx s opinion the capitalist cannot even boast of personal thrift to any great extent The capitalist gets rich not like the miser in proportion to his personal labor and restricted consumption but at the same rate as he squeezes out the labor power of others and enforces on the laborer abstinence from all life s enjoyments

THESE CONSIDERATIONS OF political economy lead us naturally back to the issue raised earlier concerning the significance of temperance for society or the effect of private intemperance on the public welfare

What is the relation between temperance and justice? Aristotle answers this question in terms of his conception of general justice as including the social aspect of all the other moral virtues To the extent that his courage or temperance can affect others or the common good a man is required by justice to be temperate and brave It is proper for the law he says to bid us do both the acts of a brave man (e g not to desert our post nor take flight nor throw away our arms) and those of a temperate man (e g not to commit adultery nor to gratify one s lust)

Though he accepts Aristotle s notion of general justice Aquinas puts a limitation on the extent to which the positive law of the state can regulate or enforce the acts of a virtue like temperance Because it is framed for a multitude of human beings the majority of whom are not perfect in virtue human laws do not forbid all vices from which the virtuous abstain but only the more grievous vices from which it s possible for the majority to abstain and chiefly those that are injurious to others without the prohibition of which human society could not be maintained The point is not that some acts of temperance cannot be prescribed by law but rather that the human law does not command every act of temperance but only those which are ordainable to the common good

The principle being clear the problem remains extremely difficult when the question is one of regulating certain types of behavior such as insobriety extravagance or adultery

Montesquieu discusses the difficulties of administering under the Julian law the punishments decreed by the Roman emperors against the incontinence of women He considers the advantages and disadvantages relative to different forms of government of sumptuary laws directed at maintaining frugality and avoiding

luxury as for example in Venice where the rich were compelled by laws to moderation and were thus so habituated to parsimony that none but courtesans could make them part with their money As for sobriety he seems to think that the problem varies with the climate the Mohammedan law against the drinking of wine being improper for cold countries where the climate seems to force them to a kind of national intemperance very different from personal inebriety A German drinks through custom and a Spaniard by choice

The reasons which have been offered against the legal prohibition of intoxicants are many and various To those who hold that temperance consists in moderation not abstinence temperance laws are misguided as well as misnamed To others like William James drunkenness as teetotalers use the word is one of the deepest functions of human nature Half of both the poetry and tragedy of human life would vanish if alcohol were taken away To still others like Mill such sumptuary laws are wrong in principle because consumption which they try to regulate is a private matter

If an individual s intemperance injures only himself he may be morally reprobated but Mill holds he ought not to be prosecuted by law A man who through intemperance or extravagance becomes unable to pay his debts or becomes incapable of supporting his family might be justly punished but it is for the breach of duty to his family or creditors not for the extravagance Again Mill writes No person ought to be punished simply for being drunk but a soldier or a policeman should be punished for being drunk on duty Whenever in short there is a definite damage or a definite risk of damage either to another individual or to the public the case is taken out of the province of liberty and placed in that of morality or law

OUTLINE OF TOPICS

REFERENCES

To find the passa es cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in **4** HOMER *Iliad* BK II [265 283] **12d** the number **4** is the number of the volume in the set the number **12d** indicates that the pas sage is in section d of page 12

PAGE SECTIONS When the text is printed in one column the letters **a** and **b** refer to the upper and lo er halves of the page For example in **53** JAMES *Psychology* **116a 119b** the passa e begins in the upper half of pa e 116 and ends in the lo er half of page 119 When the text is printed in two columns the letters **a** and **b** refer to the upper and lower halves of the left hand side of the pa e the letters **c** and **d** to the upper and lo er halves of the right hand side of the page For example in **7** PLATO *Symposium* **163b-164c** the passa e begins in the lower half of the left hand side of pa e 163 and ends in the upper half of the ri ht hand side of page 164

AUTHOR S DIVISIONS One or more of the main divisions of a work (such as PART BK CH SECT) are sometimes included in the reference line numbers in brackets are given in cer tain cases *e g Il ad* K II [265 283] **12d**

BIBLE REFERENCES The references are to book chapter and erse When the King James and Douay versions differ in title of books or in the numbering of chapters or verses the King James version is cited first and the Douay indicated by a (*D*) follows *e g* OLD TESTA M NT *Nehemiah* 7 45—(*D*) *II Esd as* 7 46

SYM OLS The abbreviation esp calls the reader s attention to one or more especially relevant parts of a whole reference passim s gnifies that the topic is d scussed intermit tently rather than ontinuously i the work or passage cited

For additional i format on concern ng the style of the references see the E planation of Reference Style f r gene al guidance in the use of *The Great Ideas* consult the Preface

1 The n ture of temperance

7 PLATO *Charmides* **1a 13d** esp **7b c** / *P otagoras* **55a** / *Phaedrus* **120b c** / *Phaedo* **225d** / *Gorgias* **275b 284d** / *Republ c* BK III **326c 334a** BK IV **347d 355a** / *Statesman* **605d 608d** / *Philebus* **627c 628a** / *Laws* BK I **645d 652d** BK III **673d 674b** BK V **689d 690c**

9 ARISTOTL *Ethics* BK II CH 3 [1104^{b}4 13] **350a** CI 7 [1107^{b}3 8] **353a** CH 8 **354a d** BK III CH 10–12 **364b 366a c** K II CH 7 [1 50 9-23] **400d-401a** CH II [1152^{b}15 17] **403d** CH 12 [153 7 35] **404c d** / *Rh tor c* BK I C I 9 [1366^{b}14] **609a**

12 EPICTETUS *Discou ses* BK II CH 17 **158d 161a** BK IV CH 4 **225a 228a**

12 AU ELIUS *Meditat ons* BK I SECT 16 **254d 255d** BK VII SECT 55 **283b c** BK III S CT 39 **288c** K IX SECT 7 **292b**

17 PLOTINUS *First E ead* TR II CH I **6c** CH 3 **7c d** CI 6–7 **9c 10a**

18 AUGUSTINE *City of God* BK XIX CH 4 **511d 512a**

19 AQUINAS *Summa Theol ca* P RT I Q 59 A 4 REP 3 **309a 310a** P RT I II Q 34 A I REP 2 **768c 769d** Q 35 A 6 REP 3 **777b 778c**

0 AQUINAS *Summa The l gica* PART I II Q 60 A 2 **50d 51b** A 4 ANS and REP 3 **52b 53a** A 5 ANS and REP 4 **53a 54d** Q 61 AA 2 5 **55c 59d** Q 63 A 4 ANS and REP 2 **65d 66c** Q 65 A I ANS **70b 72a** PART II II Q 180 A 2 REP 3 **608c 609** Q 186 A I ANS **650c 651d**

21 DANTE *D ine Comedy* PURG TORY XVII [82 139] **79b d**

22 C I UCER *Parson s Tale* par 72 73 **535b**

25 MONT IGNE *Essays* **89b 91b 165c 166a 354a b 489b 490c 540b**

30 BACON *Ad an ement of Learni g* **78a b**

31 S INOZA *Eth cs* PART IV PROP 61 **443a b** APPENDIX III **447b**

32 MILTON *Paradise Lost* BK XI [527–551] **310b-311a** / *A eopag t ca* **390b 391a**

33 PA CAL *Pensees* 69–71 **180b 181a**

42 KANT *Fund Pr Metaphysic of Morals* **256b** / *P ef Metaphysical Elements of Ethics* **3 8d 379** / *Judgement* **586d 587a**

43 MIL *Liberty* **305c 307a**

44 BO WELL *Johns* **92c**

49 DARWIN *Descent of Man* **313d 314b**

1a The r lation of temperance to virt e gen er lly and to the virtues of co rage and j stice

5 EU IPIDES *Suppl a ts* [838–917] **265d 266b** / *Iph genia at Aulis* [543–589] **429d-430a**

5 A STOPHANES *Cl uds* [955 1104] 500a 502
6 THUCYDIDES *Pelopo nesian* II BK I 370a c
7 PLATO *Charm des* I 13d / *Gorg as* 284a 285a / *Republ c* BK II 311c 312b BK IV 346a 355a BK VIII 407a-408a / *St tesman* 605d 608d / *Laws* BK I 643a 644b 645c BK III 673d 674b BK V 689d 690c
8 A ISTOTLE *Topics* BK III CH 2 [117 26-b2] 164a BK VI CH 13 [150 I 15] 204c
9 ARISTOTLE *Ethics* BK I CH 3 [1103 3 0] 348c d BK II CH 2 [1104 1] CH 3 [104b13] 349c 350a CH 6 351 352d CH 7 [11 7 33-b8] 353a CH 8 354a d BK III CH 12 [1119a2 33] 365d 366a BK V CH I [1129b 2 24] 377a BK IX CH 8 [1168b 3-1169 1] 422b d BK X H 8 432d 434a passim / *Politics* K II CH 6 [1265a28 37] 460c d BK V CH 5 [334 11 b7] 539a b / *Rhet ric* BK I CH 9 [1366 33 b22] 608d 609a K II CH 4 [1381a24-25] 627a
12 AURELIUS *M dit ti ns* BK I I SECT 6 261a-c BK V S CT I 271a BK VIII SECT 39 288 K XI SECT I 303b c
17 P OTINUS *F rst Ennead* TR I CH 3 7 d CH 6-7 9 10a
18 AU US NE *City of God* BK XIX CH 4 511d 512 CH o 523d 524a
19 AQUINAS *S mma Theolog ca* ART I Q 59 A 4 REP 3 309a 310 PART I Q 35 A 6 RE 3 777b 778c
20 AQUIN S *Summa The l gica* PART I I QQ 60-61 49d 59d Q 65 AA I 3 70b 73d Q 66 A I 75b-76b A 4 78 79b P RT SL L Q 9(A 6 REP 3-4 8-9 1058a 1061b
25 MONTA GN *Essays* 89b d
27 SHAKES EARE *M e for M a ur* ACT I SC IV [48-61] 178b c ACT II SC I [162 8] 183d 184a C IV [1 17] 184c d
30 BA ON *Ad cement of Learn ng* 72b 80c 81a
32 MILTON *C mus* [331 489] 40b-44a / *S son Ago iste* [38-59] 340b [541-5 6] 351b 352a / *Ar p git ca* 390 b
42 KANT *Fund Prin M t phy ic of M ls* 256a b / *P f Met phys l Eleme ts of Eth s* 378d 379a
49 DARWIN *D cent f M n* 315b-316a

1b The rel t on of tempe ance to knowledge nd pr den the d t rmination of the m n of temp nce

APO RYPHA *W sdom of S lomon* 8 5 7—(D) OT *B k of W d m* 8 5-7
7 PLATO *Charmide* 1a 13d esp 7a / *P otago as* 61c 62a / *C atyl* 99c / *Meno* 183d 184c / *Ph d* 225d 226c / *Republic* BK I 338a 339a / *Sophist* 557b d / *Law* BK IV 679c d / *Seven h Letter* 808d 809a
9 A I TOTL *Eth cs* K I CH 13 [03 3] 348 d K I CH [1104 0 6] 349 d CH 6-9 351 355 esp CH 6 [06b36-1107a2] 352c BK V CH 9 [113 -a 6] 385b-c BK VI CH I [1138b 6-34] 387a b CH 5 [1140b11 19] 389b c CH 9 [142b17 34] 391d 392b CH 13 394b d K VII CH 6 [1149b24-1150 1] 400b c CH 8-9 401c-403a CH II [1152b15 17] 403d CH 12 [1153 27-35] 404 d BK X CH 8 [1178 16-19] 432d CH 9 [11 9b4 30] 434b-c
11 NICO IAC US *Arithmetic* BK I 826d 827a
15 TACITUS *A nals* BK II 31a b
17 PLOTINUS *First En ad* TR II CH 6-7 9 10a
18 AUGU TINE *City of God* BK XIX CH 4 511d 512a
19 AQUINA *Summa Theologica* PART I Q 113 A I REP 2 576a d
20 AQUINAS *Summa Theologica* PART I II Q 56 A 2 REP 2 30c 31a Q 57 A 5 39a 40 Q 58 A 42a 43a A 4 44a d Q 63 A 4 ANS and REP 2 65d 66c Q 64 A 2 67d 68b Q 65 I 70b 72a Q 66 A I 75b-76b PART II I Q 180 A 608c 609c
32 MILTON *Parad se Lost* BK XI [5 -543] 310b 311a / *S ms n Agon stes* [38-59] 340b / *A eopagit a* 390a
33 PASCAL *Pensées* 69-71 180b-181a 382 383 238b
38 MON SQU EU *Spir t of Laws* BK XXVIII 259b
39 S ITH *Wealth of Nat ons* K V 346c 347a
42 K NT *Pr f Metaphysi al Elements of Ethi s* 376d 377b
44 BOSW LL *J hns* 309 -c 404b-405c
53 JAM S *Psy hol gy* 14b 15a

1c Temperance and continence the counter f ts of temperance

7 PLATO *P otag as* 59c 60a / *Phaed* 225d 226a
8 A ISTOTLE *T pics* BK VI CH 8 [46b 4 28] 200d
9 AR TOTLE *Eth s* BK I H 3 [I 2b13 8] 348a c K III C I I [119 35 b19] 366a c BK VI I Q [42b 7 34] 391d 392b C I 3 [1144b1 9] 394b-c K V I C I I 4 395 399a esp CH [146 9- 7] 396 CH 4 [1148 4] 398b c CH 5 [49 5- 4] 399 -d H 6 [149b 24 150a1] 400b CH 7-9 400d-403a esp I 9 [115 b23 115 6] 402d-403a CH I [15 7 24] 403a b
18 AUGUSTIN *C fessi n* BK VI pa 20 41b-c K V I par 26-27 60b-c
19 AQUINA *Summa Theologi a* PART I Q 98 A 2 RE 3 517d 519a
20 AQU *Summa Th logica* PART I II Q 58 A 3 REP 43b-44 Q 63 A I 63 64a O 77 AA 2 3 145d 148b Q 109 A 10 AN 347 d PA T I I Q 7 A REP 3 746 747b ART II LP L Q 96 AA 3 4 1053 1055c
22 CHAUC R *Pa s Tale* p 7 -73 535b p r 7-83 540b-542b
23 HO E *Levi th n* RT IV 272d
25 MO TAI NE *Es* 89b 91b 394d 395b

2 The varieties of intemperance the related vices of sensuality abstemiousness cruelty curiosity inordinate desire

51 TOLSTOY *War a d P ace* K I 15b 16 K V 201a c BK I 248b 50 BK VII 284 285a K III 321d 322d BK IX 349d 350d EPILOGUE I 655c 656b
52 D STOEVSKY *Brothers Karama ov* BK I 4a d K II 38d 39a BK III 50c 62a 69 70a BK V 122d 125c BK VIII 191b d 235d BK XII 370b d 372c 373
53 J ES *P ychol gy* 800a 805b esp 802b 805b

9b Temper nce n relation to duty o h pp ness

OLD T TAM NT *Proverbs* 5 6 3 35 7 2 1 20 1 21 17 23:20–21 27 35 / *Jerem ah* 35—(D) *J e mias* 35
APOC YPH *E cles asticus* 18 30–32 19 1 3 12 31 37 6–31—(D) OT *E les sticus* 18 30–32 19 1 3 31 2 42 37 9 34
N W TESTA IENT *I Co t thians* 6 9 1 / *I Timothy* 3 1–13 / *Titus* 1 5–9 2 passim / *H breus* 13 4 / *James* 1 12 15 4 1 0 / *I P ter* 1 13 14 2 11 5 8–9 / *II Peter* 2 9–22 / *I Joh* 2 15 17
5 EURIP DES *H ppolytus* 225a 236d esp [373 43] 228b d / *Ba hante* [370 433] 343a b / *Iphigenia at Aul s* [543–589] 429d 430a
7 PLATO *Charm des* 7b / *Sympo um* 156d 157a / *Gorgias* 275b 284d / *Republic* BK X 416a 427b passim / *Law* BK V 689 690 / *Seventh Letter* 806a 807a
9 A ISTOTLE *Eth cs* BK X H 7 [1177 23 b4] 431d 432a CH 8 432d 434 p ss m / *Politics* BK I H 6 [1265 8 3] 460 d
12 LUCR TIUS *Natur f Thing* BK II [1–6] 15 d BK V [1 3 1135] 75c d [1412 1435] 79b d
18 AUGU TINE *Co fe s n* BK III par 16 17 d K V par 4 27d 8a BK VI par 18 20 40d 41 BK VI I p 6–27 60b-c BK X par 40–6 81 86d / *City of G d* BK III CH 10 172d BK X X CH 511d 513c
19 AQ IN S *Su m The l gi* r T I Q 98 A 2 R 3 517d 519a
20 AQU N S *Summa Th ol g c* T I II Q 63 A 4 AN and REP 2 65d 66 Q 77 A 5 149a 150a Q 100 4 ANS 253d 255a T I Q 46 A 2 604b d
21 DANT *D ine Comedy* URGATORY XVII [8 139] 79b d
23 H B ES *Le th n* P T II 163d 164a
25 M N AIGNE *E s ys* 71a 72 165c 167 353 354b 382b 383d 540b 543
30 B N *Ad a cement of Lea* 73c d
32 MILT N *P ad s Lost* K [523–543] 310b 311a K X I [583–587] 332a / *A opag tic* 390 b
38 MONT SQU E I *Sp rit of Laws* BK 18d 19
40 G B ON *D cl a d F ll* 192b
42 KANT *F und Pri Met phy c f M r ls* 256a b / *Pra t al Re o* 3 7 d / *Pr f M t phy l Elem t of Ethic* 366d 367a / *J dge ment* 586d 587a
43 M *Liberty* 302d 312a p m
51 TOLSTOY *War a d Peace* K XIII 577d 578a BK XIV 605b d
52 DOSTOEVSKY *Brothers Karama t* BK VI 164b d BK XII 370b d
54 FREUD *Origin and Develo pme t of Psycho A aly s* 20c d / *General Int oduction* 587d 599b d / *Civili at on and Its D contents* 772 773d 793a 794a 800c 801a

9c The cultivat on of temperan e the train ng of temperate chara t r

OLD TESTAMENT *Job* 31 1 / *Proverbs* 6 23 26 23 20 31 23 16
APOCRYPHA *W sd m of S lom* 8 5–7—(D) OT *Book of Wisdom* 8 5–7 / *Eccl s a tic s* pass m esp 9 3–9 18 30–32 19 5 23 5–6 5 21 3 1 31 37—9–31—(D) OT *E cl sias t cus* passim esp 9 3 13 8 30 32 19 5 23 5–6 5 8 31 2–42 37 3 34
NEW T STAMENT *Luke* 21 34 / *Ro a s* 6 2–13 13 13 14 / *I Cori thians* 5 9 13 6 18, 7 1–9 9 24 27 / *Galatians* 15 13 6 2 23 / *Ephesia s* 5 8 / *Colossians* 3 2 8 / *I Th ssa lo n* 4 3–5 5 5 8 / *I T mothy* 6 8 11 / *II T mothy* 2.22 / *Titus* esp 2 11 15 3 3 6 / *Jam s* 4 5 0 / *I Peter* 1 13 14 2 11 4 7 5 8–9 / *I Jol n* 2 15 17
5 EURIPIDE *Iphig a at Aul s* [543 589] 429d 430a
5 AR TO HANES *Frogs* [008–1098] 576b 577c
7 PL TO *R publ c* BK II 326 339a passim / *St tesman* 605d 608d / *Laws* BK II 645d 663d pa im K III 672d 674d K V 712b K VII 715b 716a BK VI 737 738c
9 ARISTO E *H story f A mal* BK VII I [581b 1 2] 107b / *Ethics* K II C 1 4348b d 351b BK III CH 1 [9a35–b19] 366a K V CH 1 [1129b12 24] 377 BK X CH 9 [79b4 1180 33] 434b 435a / *P l t cs* BK II 1 9 [1269 1 27 14] 465d-466b BK V I I 17 [336 23 b24] 541b d K VII CH 5 [134 4 b19] 545 546a
12 E CTETUS *D s urs s* BK II CH 8 161a 162b K II CH 1 175a 177 CH 3 178d 180a H 1 187b 188b C 24 5 208b 210d
12 AUR IU *Med t t ons* BK I CT 16 254d 255d
14 P UTA CH *Lycu g s* 38a 45c / *Lycu gu Numa* 61b d 62 / *C iol nu* 174b d 175a
18 AUGUSTIN *C nf ssion* BK VI par 41b c K VII p r 26–27 60b c
20 AQ I AS *Summa Th ol gi* ART I I Q 95 A 1 226 227c
21 DANTE *D im C medy* PU G ORY XV [52 114] 77b 78a
22 CHAUCER *Pa son T l* par 2 7 535b
25 MONTA NE *Es ay* 69d 75a p ss m 534 d
26 SH KES RE *Hen y I A T I SC I* [2 37] 533b
30 BACO *Ad c ent f Le rn g* 69d 70a 78a d 79 80

(4 *The cultivation of temperance: the training of a temperate character*)

32 MILTON *Paradise Lost* BK XI [527-551] 310b-311a / *Areopagitica* 385a-b
39 SMITH *Wealth of Nations* BK V 346c-347d
40 GIBBON *Decline and Fall* 32a-b; 338d-339c; 449a-c
42 KANT *Practical Reason* 356a-360d / *Pref. Metaphysical Elements of Ethics* 365b-d / *Judgement* 586d-587a
43 MILL *Liberty* 306b-307a
51 TOLSTOY *War and Peace* BK V 201a-c; BK VI 248b-250a; BK XIII 577a-578b
54 FREUD *Origin and Development of Psycho-Analysis* 16 / *Narcissism* 407b-c / *General Introduction* 573c-d; 592b-593b / *New Introductory Lectures* 870a-b

5. The social aspects of temperance

5a. The temperance of rulers and citizens: intemperate conduct as inimical to the common good

OLD TESTAMENT: *Leviticus*, 10:8-11 / *Deuteronomy*, 17:15-17; 21:18-21 / *Proverbs*, 31:4-5 / *Ecclesiastes*, 10:16-17 / *Isaiah*, 5:22-23; 28:1-9; 56:9-12—(D) *Isaias*, 5:22-23; 28:1-9; 56:9-12 / *Amos*, 6
APOCRYPHA: *Ecclesiasticus*, 47:19-21—(D) OT, *Ecclesiasticus*, 47:21-23
NEW TESTAMENT: *I Timothy*, 3:1-13 / *James*, 4:1-3
5 SOPHOCLES *Ajax* [1052-1070] 152a-b
5 EURIPIDES *Suppliants* [838-917] 265d-266b / *Trojan Women*... 382a-383a / *Iphigenia at Aulis* [543-589] 429d-430a
5 ARISTOPHANES *Clouds* [882-1104] 499b-502a / *Frogs* [1008-1098] 576b-577c / *Lysistrata* [387-425] 588a-b
6 HERODOTUS *History* BK I, 2d-3d; BK III, 95a-98a; BK VI, 222c-d; BK IX, 311b-312d
6 THUCYDIDES *Peloponnesian War* BK VI, 513a-d; 516c
7 PLATO *Republic* BK II, 318a-319a; BK III, 326c-339a; BK IV, 346a-355a; BK VIII, 407a-408a; 409d-411d; BK IX, 416a-418... / *Critias* 481a-485b,c / *Statesman* 605d-608d / *Laws* BK III, 669b-671a; 672d-676c; BK V, 679c-d; BK VIII, 733b-d; BK IX, 751b-d / *Seventh Letter* 801b-c; 806d-807a
9 ARISTOTLE *Ethics* BK IX, CH 8 [1168b23-1169a1] 422b-d / *Politics* BK I, CH 13, 454a-455a,c; BK II, CH 5 [1263b7-14] 458d; CH 6 [1265a38-b3] 460c-d; CH 7 [1269b13-1270a14] 465d-466b; BK III, CH 4 [12..b16-..9] 474d-475a; BK III, CH 5 [1326a26-37] 530d-531a; CH 15 [1334a11-36] 539a-b / *Rhetoric* BK I, CH 9 [1366a33-b15] 608d-609a
12 EPICTETUS *Discourses* BK II, CH 10, 149c-d; BK III, CH ..., 184a
12 AURELIUS *Meditations* BK I, SECT 16, 254d-255d
14 PLUTARCH *Lycurgus* 32a-48d esp 48b-c / *Lysander* 361b-d / *Agesilaus* 489d-490b / *Alexander* 549d-551c / *Cato the Younger* 621c-622b / *Cleomenes* 661a-d / *Demosthenes* 699c-700a
15 TACITUS *Annals* BK III, 57b-58d; BK VI, 86a-b; BK XV, 166b-c / *Histories* BK II, 230d-231a
21 DANTE *Divine Comedy*, HELL, XIX 26d-28b; PURGATORY, XIX-XX 81c-85a
24 RABELAIS *Gargantua and Pantagruel* BK III, 133b-140b
25 MONTAIGNE *Essays* 436c-438b
26 SHAKESPEARE *Richard III*, ACT III, SC VII [1-80] 129d-130c / *1st Henry IV*, ACT I, SC III [1-21] 437d-438a; ACT III, SC II [11-161] 453a-454c / *2nd Henry IV*, ACT IV, SC V [97-184] 495b-496b; ACT V, SC II [122-145] 499b / *Henry V*, ACT I, SC I [24-69] 533b-c
27 SHAKESPEARE *Troilus and Cressida*, ACT V, SC I 133b-134c; SC II [190-197] 136d-137a / *Measure for Measure*, ACT I, SC IV [31-54] 178b-c; ACT II, SC II [162-187] 183d-184a; SC IV [1-17] 184c-d; [111-187] 185d-186c; ACT III, SC II [2-5; 296] 192b / *Macbeth*, ACT IV, SC III [1-139] 303b-304d / *Pericles*, ACT I, SC I-II 421d-425a
38 MONTESQUIEU *Spirit of Laws* BK II, 8d-9a,c; BK III, 10a; 10c-11a; BK V, 18d-19d; 23a-b; BK VI, 37d-38b; BK VIII, 51a-53a; BK XII, 94d-95b; BK XXIX, 262a-b
39 SMITH *Wealth of Nations* BK II, 146a-148c; 149d-150a; BK V, 346c-347d
40 GIBBON *Decline and Fall* 35a-39c passim; 55c-56a; 138d-140c passim; 256c-257a; 338d-340c; 448c-449b
43 FEDERALIST: NUMBER 1, 29d-30c; NUMBER 3...118; NUMBER 62, 190b; NUMBER 63, 192c-d
43 MILL *Liberty* 302d-312a passim
44 BOSWELL *Johnson* 393a-c
46 HEGEL *Philosophy of Right*, PART III, par 185 64b-d
49 DARWIN *Descent of Man* 315c-316a; 325b-327a passim
54 FREUD *General Introduction* 452c-d; 573c

5b. The temperance of a people: luxurious indulgences, the intemperance of the mob

OLD TESTAMENT: *Exodus*, 16:1-3 / *Numbers*, 11 / *Isaiah*, 3:16-26—(D) *Isaias*, 3:16-26 / *Ezekiel*, 7:17-27—(D) *Ezechiel*, 7:17-27 / *Amos*, 6
5 EURIPIDES *Orestes* [682-716] 400d-401a; [866-956] 402d-403d
6 HERODOTUS *History* BK I, 46c-d; 4..c; BK IX, 305d-306a; 314a,c
6 THUCYDIDES *Peloponnesian War* BK I, 370a-c; BK II, 400c-401a; BK III, 436c-438b
7 PLATO *Republic* BK II, 318a-319...; BK III, 326c-328b; BK IV, 342a-d; BK VIII, 408b-411d
9 ARISTOTLE *Politics* BK II, CH 9 [1269b13-1270a14] 465d-466b

14 PLUT RCH *Lycurgus* 32a-48d esp 36b 37b / *Lycu gu s Numa* 61b d 64a c esp 62a b / *Agis* 648b d-649b
15 T CITUS *Annals* BK III 57b-58d / *Hi tories* BK I 197d 199b 204b d 206b 210d 212b 213d 214b BK II 222b c 232d 233a 238d 239 BK III 264b 265d BK IV 277c d
18 AUGUSTINE *City of God* BK I CH 30-33 147b 149a
25 MONTA GNE *E says* 54b d
26 SHAKESP ARE *2nd Henry VI* ACT IV 56a 64d / *2 d Henry IV* ACT I SC III [85 1] 473d-474a
27 SH KES EARE *Coriolanus* ACT I SC I [1 2 5] 351a 353d
38 MONT SQUIEU *Spirit of Laws* BK III 10a BK V 18d 19d BK VII 44a-47a BK VIII 51a 52c BK XVI 118a b
39 SMITH *Wealth of Nations* BK V 346c 347d
40 G BON *Decl ne and Fall* 90a c 92 d 216a-c 509b 510d
41 GIB ON *D cline a d Fall* 94d 397c 398a 551b 552d
43 M LL *Represent tive G vernment* 329c
44 BOSWELL *J hnson* 210d 211b
46 HEGEL *Ph losophy f History* INTRO 198b 199b PART IV 316c d
52 D S OEV KY *Brothers Ka am ov* BK V 164b 165c
53 JA S *Psy hology* 719a 720a
54 F UD *G up P y hology* 666 668c p ss m 670d 671 / *Civ l z t on and Its D sc tents* 787b

5c Laws conce ning temp rance the extent to wh ch the sphe of temperance can be regul ted by l w

OLD TE TA EN *Exodus* 2 14 7 / *Le iticus* 10 8 11 18 2 -23 / *Deuter nomy* 5 18,21 21 8 21 23 7
NEW TE TA ENT *Matthew* 5 7 28
5 EURIPIDE *Bacchantes* [2 5-369] 341d 343a
7 PLATO *G gias* 283 285a / *Rep ibl* K V 348a d / *Laws* K I II 643a 663d esp K I 663b d BK III 675 676b BK VI 708c 709 712b BK VI 713c 716b esp 713 718c 720d BK V I 731d 738c
9 AR TOTLE *Eth cs* BK II CH I 348b d 349b p ssim esp [3b -6] 349 K V CH [1 29b1 24] 377 K X CH 9 [179 4 8 33] 434b 435a / *P l t c* BK II CH 9 [1 69 3-127 4] 465d-466b K VII CH 7 [336 3 b24] 541b d
14 P UT CH *Ly urgus* 32a-48d esp 36b 37b / *Lycurgu Num* 61b d 62 / *Ly nder* 361 d
15 TACI US *A l* K 31 b K 57b 58d
20 AQU NA *S mma Tl olog c* T Q 96 AA 2 3 231c 233a Q 1 A 2 7 252b 259 A I AN d R P 3 263c 264d Q 1 8 A 3 REP 1 334a 336b
21 D NT *D Comedy* UR ATORY XVI [8 1 4] 77d 78a
25 MON I N *Essays* 131b 132a
27 SI KESPEARE *Measure fo M asure* ACT II S I [225- 70] 181a c ACT III SC II [91 128] 190c d
30 B CON *Advancement of Learn ng* 54 b
32 MILTON *Areopagit a* 390 b 393a 395b
38 MONTESQUIEU *Spir t of Law s* BK V 18b d 19d K VII 44d-48a 49 50c BK XI 86b 87c 88a BK X V 105 106b BK XVI 119d
38 ROUSS AU *Social Co tract* BK IV 434b-435a
39 SMITH *W alth f Nat ns* BK II 150a BK IV 211a b K V 346c 347d
40 GI BON *D l and F ll* 100c 101b
41 GIBBON *Decli e and Fall* 93d 94
42 KANT *Intro Metaphysic of Morals* 383a b 389a b
43 CONS TUTION O THE U S AMENDM NTS XV I 19c d XXI 20
43 FEDERALI T NU I ER I 58b c
43 MILL *Liberty* 292b 293b 302d 312a p s-s m esp 309d 310c 314a 316b
44 BOSWELL *Johns n* 301c d
54 FREUD *Group P ychol gy* 690b-c

6 The extremes of temperance and intemper ance

6a Asceticism he o ctemper nce

OLD TES AM ENT *Gen sis* 39 7 1 / *Exodus* 4 8 34 28 / *Numbers* 6 1 / *Judges* 13 1 7 / *I K gs* 9 4 8—(D) *III K ngs* 19 4-8
NEW TES A ENT *Matthew* 4 1 11 19 / *M k* 12 13 / *Luk* 1 5 17 esp 1 5 4 1-13 / *I C th ns* 7 36-38 9 24 7 / *I T mothy* 4 1 10
5 EURI ID S *H ppolytus* 225 236d
7 P TO *Laws* K V 1 737c 738c
12 EP CTETUS *Di courses* K I I CH 15 190 191a
17 PLOTINUS *First Ennead* TR II C I 5 8c 9 CH 7 9c 10a TR IV CH 14 18a c TR VI CH 6 24a-c
18 AUGUSTINE *Conf ions* K II par 3 9b K V I par 26-27 60b c / *City of God* BK CH 6-18 139c 140d / *Chr stia Do trin* BK I CH 24 630c 631
20 AQUINAS *Summa The logic* PART I I Q 64 A I R 3 66d 67c PAR II I Q 184 A 3 630d 632c A 6 634c 636 Q 186 AA 1-4 650 656b AA 7 8 658d 660a PART III SUP L Q 96 A 5 1055c 1058a
22 CHAUCER *S cond Nu s Tale* 463b-471b
24 RAB LAIS *Ga ga tua and P ntagruel* BK II 152a d
25 MONT GNE *Ess ys* 111a b 120d 121d 165 167 350d 351b 353c 354b 425c-426b
26 SHAKES E RE *Lo s Labour s Lost* ACT I SC I [1 16] 254a 256a / *Mid ummer N ght s Dr m* ACT S I [67 78] 353 b
29 CE VANT *D n Qu x te* P T I 81b 91d
32 MILTON *Comus* 33 56b e p [759-813] 48a 51b

(6. The extremes of temperance and intemperance. 6a. Asceticism: heroic temperance)

33 PASCAL *Provincial Letters* 64b 65b
38 MONTESQUIEU *Spirit of Laws* BK V 19a BK VI 38b BK XXV 210a b
39 SMITH *Wealth of Nations* BK V 347a d
40 GIBBON *Decline and Fall* 191d 193c 338d 340c passim 593b d 599a
42 KANT *Practical Reason* 327a d
44 BOSWELL *Johnson* 283a
46 HEGEL *Philosophy of History* PART I 224b d 228b PART IV 340d 341a
52 DOSTOEVSKY *Brothers Karamazov* BK IV 85a 87b
54 FREUD *General Introduction* 624a c / *Civilization and Its Discontents* 773c

6b The dionysiac spirit the cult of pleasure

OLD TESTAMENT *Ecclesiastes* 8 15 / *Isaiah* 22 13—(D) *Isaias* 22 13 / *Amos* 6 3-6
APOCRYPHA *Wisdom of Solomon* 2 esp 2 1 9—(D) OT *Book of Wisdom* 2 esp 2 1 9
4 HOMER *Odyssey* BK X [210 465] 238b 240d
5 EURIPIDES *Alcestis* [782-802] 244a / *Bacchantes* 340a 352a c / *Cyclops* [139-174] 441c d [495 589] 444d-445d
5 ARISTOPHANES *Acharnians* [241-279] 458a b
6 HERODOTUS *History* BK II 77a b
6 THUCYDIDES *Peloponnesian War* BK II 400d 401a
7 PLATO *Seventh Letter* 801b c
9 ARISTOTLE *Ethics* BK I CH 5 [1095^{b}14 22] 340d BK III CH 12 [1119 35 ^{b}19] 366a c BK VII CH 14 [1154^{b}2 15] 405d-406a
14 PLUTARCH *Alcibiades* 161d 162b / *Lucullus* 419b 420b / *Alexander* 572b-d / *Demetrius* 732d 733a 747b / *Antony* 748a 779d esp 751b c 755d 756c 757c 758c / *Antony-Demetrius* 780c d / *Dion* 783c 784a
15 TACITUS *Annals* BK III 57b 58d BK VI 86a b BK XI 103b-c 107b c 108b c BK XIV 145a d BK XV 166b-c
19 AQUINAS *Summa Theologica* PART I Q 18 A 2 REP 2 105c 106b
20 AQUINAS *Summa Theologica* PART II II Q 173 A 2 REP I 3 607a c
24 RABELAIS *Gargantua and Pantagruel* BK I 7a 8c 60c 66b BK IV 234a 235a
25 MONTAIGNE *Essays* 28b d 406a 408b
26 SHAKESPEARE *1st Henry IV* ACT I SC II [1 116] 435c-436c ACT II SC IV [438-527] 448b-449b / *2nd Henry IV* ACT III SC II [200 234] 485d 486a [321 359] 486d-487a
40 GIBBON *Decline and Fall* 38a b 60 c 649d 650b
41 GIBBON *Decline and Fall* 174c 175c
42 KANT *Intro Metaphysic of Morals* 387b 388a
43 MILL *Utilitarianism* 447b-449c
46 HEGEL *Philosophy of History* PART I 228b-c
47 GOETHE *Faust* PART I [3835 4222] 93b 103a
51 TOLSTOY *War and Peace* BK VIII 321d 322d 334d 335a
52 DOSTOEVSKY *Brothers Karamazov* BK I 4a d BK III 46a 82a c passim

CROSS REFERENCES

For The general theory of virtue in its bearing on temperance and for discussions bearing on the nature of temperance *see* DESIRE 6a EMOTION 4b(1) MIND 9b-9c PLEASURE AND PAIN 8a VIRTUE AND VICE 1 1c 5a-5c

Temperance in relation to knowledge and to other virtues *see* COURAGE 4 PRUDENCE 3b 3d VIRTUE AND VICE 1b-1c 2a(1) 3a-3b

Other discussions of continence *see* PRUDENCE 3d VIRTUE AND VICE 1c

The consideration of extreme forms of intemperance *see* DESIRE 7a-7a(3) INFINITY 6a SIN 4c WEALTH 10e(3)

Other discussions which show the relation of temperance to duty and happiness *see* HAPPINESS 2b(3) VIRTUE AND VICE 1d 6a

The problems involved in training a temperate character *see* EDUCATION 4a-4d PUNISHMENT 3a VIRTUE AND VICE 4a-4d(4) and for the extent to which temperance can be regulated by law *see* LAW 6d PLEASURE AND PAIN 9 VIRTUE AND VICE 4d(3)

The issue concerning asceticism and self-denial *see* DESIRE 6b PLEASURE AND PAIN 7b RELIGION 3d VIRTUE AND VICE 8f-8g WEALTH 10e(2)

Another consideration of the dionysiac or bacchic spirit *see* PLEASURE AND PAIN 4d 7b

ADDITIONAL READINGS

Listed below are works not included in *Great Books f the W stern World* but relevant to the idea and topics w th which this chapter deals These works are di ided into two groups

I Works by authors represented in this collection
II Works by authors not represented in this collection

Fo the date place and other facts concerning the publication of the wo ks cited consult the B bliog aphy f Additional Readings which follows the last chapter of *Th Gr at Ideas*

I

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AUGUSTINE *Of C ntinenc*
AQ N S *Summa Th ologica* P RT II–II QQ 141–17
A SMITH *The Theory of Moral Sentiments* PART VI SECT III

II

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HORACE *Sat es* BK II (2)
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S ENS R *The Faerie Queene* BK II
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BOSSU T *Trait de la concupiscen*
MANDEVILLE *The F ble of the Bees*
J BUTLER *Fifteen Serm ns upon Human N ture*
FRANKLIN *Po r Richa d's Almanack*
SCHOPENH UER *The W o ld as W ll and Idea* VOL I BK IV
T H GREEN *Prol gomena to Eth s* BK III CH 5
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—— *Th Gen alogy of Moral* III
WE ER *The Protestant Ethic and the Sp rit of Cap tal m* CH 4–5
H DEBRAND *In D f nse of Purity*
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VANN *On Being Hum n*
HUIZINGA *In the Sl adow f T morrow*

Chapter 92 THEOLOGY

INTRODUCTION

IT has seldom been disputed that the questions with which theology deals are of critical significance for all the rest of human knowledge Even those who deny that theology is or can be a science might be willing to concede that if it were it would deserve its traditional title queen of the sciences

It has been said that the great questions of theology are unanswerable It has been said that theological dispute or controversy is futile because the issues are not resolvable by argument But it has rarely been asserted or even implied that our outlook would be unaltered and our actions unaffected if we could know in any degree the answers to questions concerning the existence of the supernatural and its relation to the visible world of nature To Plato it is of such importance that he asks Who can be calm when he is called upon to prove the existence of the gods?

The main controversy not in but about theology turns on the use of such words as knowledge and science *for a discipline* which both in method and conclusion seems compelled to go beyond experience and to push reason to (or even beyond) the limit of its powers In the minds of many especially in our day theology is associated with religion and is opposed to science or if not opposed at least it is set apart from science as entirely different Those who conceive science as limited by its empirical methods to the investigation of observable phenomena might not quarrel with the allocation of theology to philosophy but whether or not they did would in turn depend on their conception of philosophy

As the chapters on SCIENCE and PHILOSOPHY indicate these two terms are identified through a large part of the western tradition The various sciences are regarded as branches of philosophy But we also find a distinction being made in the 18th century between the empirical and rational or philosophical sciences and in our day those who regard philosophy as mere speculation or opinion contrast it to the experimental disciplines which are thought to be the *only* established bodies of knowledge that is sciences

The question whether theology is a science may therefore embrace a number of alternatives That it is an empirical or experimental science has seldom been proposed It may be treated as a science however by those who consider it as a part of philosophy or it may be denied that honor precisely because it belongs to philosophy A third alternative remains— that theology is separate from philosophy that it is a science as distinct in character from the philosophical sciences as they are from the experimental disciplines In this third alternative the association of theology with religion or religious faith seems to determine the character of theology

It is this third alternative which Hume seems *to have in mind at the conclusion of his Enquiry* Divinity or Theology as it proves the existence of a Deity and the immortality of souls has he writes a foundation in *reason* so far as it is supported by experience But its best and most solid foundation is *faith* or divine revelation To the extent that its principles come from religious faith theology does not seem to fit perfectly into Hume s twofold division of the sciences into those which involve abstract reasoning concerning quantity or number and those which involve experimental reasoning concerning matter of fact and existence

When he says that he would commit to the flames any volume of divinity or school metaphysics which does not contain either of these two kinds of reasoning —for then it can contain nothing but sophistry and illusion —he can hardly be condemning the theology he has

himself described as resting primarily on faith or divine revelation though it may also have some foundation in reasoning from experience

THE DISCUSSION OF THE nature and scope of theology its principles and methods may refer either to the theology which is a part of philos ophy or to the theology which is sometimes called dogmatic because it expounds and ex plains the dogmas of a rel gious faith Further more those who make the distinction between the two kinds of theology raise questions con cerning their relation to one another In so do ing they enter into the larger problem of the relation of faith and reason and the limited part which reason can play in the development of a theology which rests on faith

The d stinction itself is made by many *writers and in diverse ways The theology which* is entirely philosophical and independent of any religious faith is usually called natural theology The name sacred theology is given to a body of doctrine which finds its fundamen tal prin iples in the articles of a religious faith The ultimate source of these articles of faith in Jewish Christian and Mohammedan theolo y is the truth revealed in a sacred scripture—the Old and New Testament or the Koran—from which by interpretation the articles of faith are drawn

Bacon for example defines divine philos ophy or natural theology as that knowledge or rudiment of knowledge concerning God which may be obtained by the contemplat on of h s creatures which knowledge may be truly te med divine in respect of the object and nat ural in respect of the light The bounds of th s knowledge are that it suffices to convince athe ism but not to inform religion In contrast inspired theology or sacred theology (which in our id om we call divinity) is grounded only upon the w rd and oracle of God and not up on the light of nature

Kant makes a similar d stinction when he says that theology is based either on rea on alone (*theolog a rat onal s*) or upon revelation (*theologia revelata*) But for Kant natural the ology designates only one kind of rational the ology Another kind is transcendental theol ogy which differs from the first in the method which reason employs He also differentiates be tween speculative and moral theology Though both fall within the sphere of reason one is the work of the pure theoretic reason the other of the pure practical reason

In the opening question of the *Summa Theo logica* Aquinas tries to explain why in addition to the philosophical science built up by reason there should be a sacred science learned through revelation To an objection which claims that there is no need of any further knowledge be cause philosophical science can attain to knowl edge even of God Himself he replies that there is no reason why those things which may be learnt from philosophical science so far as they can be known by natural reason may not also be taught us by another science so far as they fall within revelation Though they may deal with the same object sciences are differ *entiated according to the various means through* which knowledge is obtained Hence the theology included in sacred doctrine differs in kind from that theology which is part of ph los ophy

In another place Aquinas refers to the theo logical conclusions which the philosopher thinks he can demonstrate— the existence of God and other like truths about God which can be known by natural reason Of these he says that they are not articles of faith but are pre ambles to the articles Nevertheless he adds there is nothing to prevent a man who cannot grasp a proof accepting as a matter of faith something which in itself is capable of being scientifically known and demonstrated But such propositions which belong to both reason and faith are only part of sacred doc trine In addition there are the propositions which belong to faith alone

It is impossible Aquinas writes to attain to the knowledge of the Trinity by natural reason The triune nature of the Godhead can not be demonstrated philosoph cally nor can the dogma be fully comprehended by human understanding In Purgatory Dante learns that

Mad is he who hopes that our reason can tra verse the infinite way which One Substance in Three Persons holds

Though it is not a theological myst ry in the same sense another example of a dogma not demonstr ble by reason is the proposition that the world began to be That the world did not

always exist Aquinas declares we hold by faith alone it cannot be proved demonstratively which is what was said above of the mystery of the Trinity We find in Sacred Scripture the words *In the beginning God created heaven and earth* in which words the newness of the world is stated and so the newness of the world is known only by revelation

With respect to such matters as belong to faith alone a theologian like Aquinas cautions against the misuse of reason When anyone in the endeavor to prove what belongs to faith brings forward arguments which are not cogent he falls under the ridicule of the unbelievers since they suppose that we base ourselves upon such arguments and that we believe on their account Therefore we must not attempt to establish what is of faith except by authority alone and only to those who accept the authority For those who do not accept the authority of Scripture the most that reason can do concerning propositions peculiar to faith is to prove that what faith teaches is not impossible Elsewhere Aquinas points out that although the argument from authority based on human reason is the weakest yet the argument from authority based on divine revelation is the strongest

THE FOREGOING THROWS some light on Montaigne s defense of a book by Raimond de Sebonde bearing the title *La theologie naturelle* Though he calls his work natural theology de Sebonde according to Montaigne undertakes by human and natural reasons to establish and make good against the atheists all the articles of the Christian religion What his opponents reprehend in his work is that Christians are to blame to repose upon human reasons their belief which is only conceived by faith and the particular inspiration of divine grace

Montaigne agrees that it is faith alone that vividly and certainly comprehends the deep mysteries of our religion But he also thinks that it is a brave and very laudable attempt to accommodate the natural and human capabilities that God has endowed us with to the service of our faith It is not to be doubted he says that it is the most noble use we can put them to and that there is no design or occupation more worthy of a Christian man than to make it the aim and end of all of his thoughts and studies to embellish extend and amplify the truth of his belief

The conception of natural theology which Montaigne appears to entertain in his Apology for Raimond de Sebonde does not seem to differentiate it from sacred theology insofar as all its principles are articles of faith Quite apart from de Sebonde Montaigne himself does not think that the existence of God or the immortality of the soul can be demonstrated by reason Montaigne observes how short the most constant and firm maintainers of this just and clear persuasion of the immortality of the soul fall and how weak their arguments are when they go about to prove it by human reason Let us ingenuously confess that God alone has dictated it to us and faith tis no lesson of nature and our own reason

Though the denial of God s existence is according to Montaigne a proposition unnatural and monstrous difficult also and hard to establish in the human understanding he thinks the affirmation to be no less beyond reason s power to establish with certitude for all things produced by our own reasoning and understanding whether true or false are subject to incertitude and controversy

In this Montaigne differs not only from a theologian like Aquinas who assigns certain truths to natural theology as capable of being demonstrated by reason without the aid of faith but also from such philosophers as Descartes Spinoza and Locke who hold that we can know God by reason with more certainty and even (according to Spinoza) more adequately than we can know most other things

I have always considered Descartes writes that the two questions respecting God and the Soul were the chief of those that ought to be demonstrated by philosophical rather than theological argument For although it is quite enough for us faithful ones to accept by means of faith the fact that the human soul does not perish with the body and that God exists it certainly does not seem possible ever to persuade infidels of any religion unless we begin with we prove these two facts by means of the natural reason

Descartes it appears reserves the use of the

word theology for sacred doctrine What others like Bacon call natural theology he treats simply as philosophy or that branch of it which he calls metaphysics Dedicating his *Meditations* to the dean and doctors of the sacred faculty of theology in Paris he says I have noticed that you along with all the theologians did not only affirm that the existence of God may be proved by the natural reason but also that it may be inferred from the Holy Scriptures that knowledge of Him is much clearer than that which we have of many created things and as a matter of fact is so easy to acquire that those who have it not are culpable in their ignorance

But Descartes wishes to confess the limitations of the mere philosopher s knowledge of God When he came to inquire how God may be more easily and certainly known than the thin s of this world no matter how much certainty and evidence I find in my reasons he could not persuade himself he says that all the world is capable of understanding them There are not so many in the world who are fitted for metaphysical speculations as there are for those of geometry

Answering a critic who quotes Aquinas against him he later writes I admit along with all theologians that God cannot be comprehended by the human mind and al o that He cannot be distinctly known by those who try mentally to grasp Him at once in His entirety

Wherever I have said that God can be clearly and distinctly known I have understood this to apply only to this finite cognition of ours which is proportionate to the diminutive capacity of our minds

So FAR WE HAVE considered the distinction between natural and sacred theology—or between philosophy and theology—as it is made in the Christian tradition by writers conscious of the difference between faith and reason or revelat on and demonstration In pagan ant quity there seems to be no equivalent of sacred theology The various modes of worship which prevailed in the Roman world Gibbon tells us we e all considered by the people as equally true by the philosopher as equally fal e and by the magistrate as equally useful The superstition of the people was not embittered by theological rancour nor was it confined by the chains of any speculative system It was the elegant mythology of Homer he says not reasoning which gave a beautiful and almost a regular form to the polytheism of the ancient world

Of the Greek philosophers Gibbon remarks that they meditated on the Divine Nature as a very curious and important speculation but only the Stoics and the Platonists endeavored to reconcile the jarring interests of reason and piety Plato s criticism of the poets in the *Republic* for their impiety and his rational defense of piety in the *Laws* accompanied by a demonstration of the existence of the gods may be taken as examples of ancient theological discourse within a religious context Another example and from quite another point of view is Cicero s *De Natura Deorum* which Gibbon praises as the best guide to the opinions of the philosophers concerning the tenets of polytheism

But neither Cicero nor Plato treats theology as a science The ancient philosopher who does and who moreover regards theology as the highest of the speculative sciences seems to proceed without reference to or benefit of prevailing religious beliefs Aristotle dismisses the school of Hesiod and all the theologians [who] thought only of what was plausible to themselves He refers to the legends of the gods which our forefathers in the most remote ages have handed down to their posterity in the form of a myth with a view to the persuasion of the multitude and to its legal and utilitarian expediency But the highest science which Aristotle sometimes calls first philosophy he also calls theology It deals with the immaterial and the insensible the immovable and eternal We may call it theology he writes since it is obvious that if the divine is present anywhere it is present in things of this sort In another place he says there are three kinds of theoretical sciences—physics mathematics theology and of these the last named is best for it deals with the highest of existing things

At the beginning of the *Metaphys cs* Aristotle gives another reason for thinking that theology is a divine science not that it is divinely inspired but that having the divine for

its object it is the science most meet for God to have Such a science either God alone can have or God above all others The title given the book in which Aristotle attempts to develop this science comes in the later tradition to be the name given to speculation concerning immaterial and insensible substances What Aristotle calls theology Descartes as we have seen calls metaphysics in order to distinguish it from the theology based on revelation

Whether the theology of a pagan philosopher is commensurable with the theology of Jewish or Christian thinkers even when the latter attempt to be purely philosophical or natural theologians is a question which deeply probes the relation of reason to faith For even when reason tries to proceed independently of faith the religious faith of a community may tinge the concepts the philosopher uses and define the problems he undertakes to solve It may be one thing to prove the existence of a Prime Mover and another to know by reason the nature and existence of the God who in the beginning created heaven and earth—the God of Abraham Isaac and Jacob the God of the Christians whom Pascal distinguishes from the God of the philosophers

Augustine explains his attitude as a theologian toward the theories of the philosophers touching divine matters I have not undertaken he says to refute all the vain theological opinions of all the philosophers but only of such of them as agreeing in the belief that there is a divine nature and that this divine nature is concerned about human affairs do nevertheless deny that the worship of the one unchangeable God is sufficient for the obtaining of a blessed life after death as well as at the present time Since Plato defined the wise man as one who imitates knows and loves this God and who is rendered blessed through fellowship with Him in His own blessedness why discuss with the other philosophers? It is evident that none come nearer to us than the Platonists

Plato according to Augustine is justly preferred to all the other philosophers of the Gentiles those among his followers who show the greatest acuteness in understanding him entertain such an idea of God as to admit that in Him are to be found the cause of existence the ultimate reason for the understanding and the end in reference to which the whole life is to be regulated So amazing to his mind are the parallels between certain insights expressed by Plato and the wisdom of Sacred Scripture that Augustine is almost inclined to believe that Plato was not ignorant of those writings But he does not think it necessary to determine whether Plato had acquaintance with the writings of Moses and the prophets because certain basic truths which were revealed to the Hebrews were made known to the gentiles through the light of nature and reason That which is known of God the apostle had said has been manifested among them for God hath manifested it to them

Therefore Augustine feels justified in taking any truth from Plato which is consistent with Christian faith Aquinas borrowing much from Aristotle explains that sacred doctrine makes use of the authority of philosophers in those questions in which they were able to know the truth by natural reason Sacred theology uses the doctrines of the philosophers he adds not as though it stood in need of them but only in order to make its teaching clearer It is in this sense that Aquinas calls philosophy the handmaiden of theology

Others seem to take a different view of this relationship Montaigne wonders whether it would not be better if the divine doctrine as queen and regent of the rest kept herself apart and he quotes St Chrysostom to the effect that philosophy has long been banished from the holy schools as a handmaid altogether useless Hobbes goes further He describes the traditional theology as a mingling of Aristotle's metaphysics with Scripture and claims that the bringing of the philosophy and doctrine of Aristotle into religion by the Schoolmen caused the many contradictions and absurdities which brought the clergy into a reputation both of ignorance and of fraudulent intention and inclined people to revolt from them.

Hegel however dismisses the criticism that is often made concerning the dependence of Christian theology at least in its formative period on pagan philosophy The Fathers of the Church and the Councils he writes constituted the dogma but a chief element in this constitution was supplied by the previous de-

velopment of *philosophy* That certain dogmas were introduced into the Christian religion through the instrumentality of philosophy is not sufficient ground for asserting that they were foreign to Christianity and had nothing to do with it It is a matter of perfect indifference where a thing originated the only question Hegel insists is Is it true in and for itself? Many think that by pronouncing the doctrine to be Neo Platonic, they have *ipso facto* banished it from Christianity Whether a Christian doctrine stand exactly thus and thus in the Bible is not the only question The Letter kills, the Spirit makes alive

COMPARED WITH SACRED theology the subject matter of natural theology and the scope of its problems seem to be extremely narrow At most it is only a part of philosophy and some writers treat it as no more than one part of metaphysics

Kant for example divides metaphysics into three parts—theology cosmology and psychology—according to his conception of metaphysics as having for the proper object of its inquiries only three grand ideas God Freedom and Immortality As a branch of transcendental speculation theology is concerned primarily with the problem of God s existence Similarly Aristotle s metaphysical inquiries include more than his theology His theology begins only after he has discussed the nature and being of sensible substances It is stated mainly in Book XII of the *Metaphysics* where he considers the existence and character of immaterial substances *and of the one purely actual being* which is God

Descartes conception seems to be broader for he regards the immortality of the soul as well as the existence and nature of God as being characteristically theological problems even when they are treated in metaphysics and by the methods of the philosopher Because these two problems concern spiritual beings Adam Smith also groups them together under the name pneumatics or pneumatology which he identifies with metaphysics—that part of philosophy most emphasized in the universities of Europe where philosophy was taught only as subservient to theology Bacon alone seems to separate natural theology entirely from metaphysics which along with physics is for him a part of natural rather than divine philosophy But though he would limit natural theology to that knowledge of God which can be drawn from nature and excludes attempts to induce from nature any verity or persuasion concerning the points of faith he grants that natural as well as divine theology may treat of the nature of angels and spirits as neither inscrutable nor interdicted

The subject matter of sacred theology or what he calls divinity is according to Bacon s account much more extensive He first divides it into matter of belief and matter of service and adoration and from these two derives the four main branches of divinity faith manners liturgy and government The matter of faith contains the doctrine of the nature of God of the attributes of God and of the works of God Under manners Bacon lists the consideration of divine law and the breach of it by sin liturgy concerns the sacraments and rituals of religion government the organization offices and jurisdictions of the church

As its title indicates the *Summa Theologica* of Aquinas endeavors to set forth the sum of theological knowledge In addition to the topics and problems peculiar to sacred doctrine the subject matters treated in the *Summa* seem to represent the whole range of human inquiry—almost co-extensive with the scope of the natural sciences and philosophy both speculative and moral

Aquinas explains the encyclopedic character of the *Summa* by pointing out that to have God *as the subject matter of theology means that* sacred doctrine treats all things under the aspect of God either because they are God Himself or because they refer to God as their beginning and end The unity of theology in covering so wide a diversity of matters consists in the single formality under which they are considered—the formality of being divinely revealed That is why objects which are the subject matter of different philosophical sciences can yet be treated by this one single sacred science under one aspect namely insofar as they can be included in revelation

Thus for example in the preamble to his Treatise on Man Aquinas writes The theologian considers the nature of man in relation to

the soul but not in relation to the body except insofar as the body has relation to the soul This emphasis is dictated by the articles of Christian faith which concern man in both body and soul Similarly with respect to moral matters Aquinas explains that the theologian considers human acts inasmuch as man is thereby directed to happiness and he takes account of the circumstances of human acts because they may excuse from sin the consideration of which belongs to the theologian It belongs to the theologian only when sin is conceived as an offense against God but to the moral philosophers when it is conceived as something contrary to reason

IT APPEARS FROM THE foregoing that sacred theology is both speculative and practical (or moral) It deals with the nature of divine things and with human acts but with the latter only so far as they have God for their rule or end Although among the philosophical sciences Aquinas writes some are speculative and others practical sacred doctrine includes both

Even though it is made on the level of the philosophical sciences Kant s distinction between speculative and moral theology seems to be based on a different principle For Aquinas the speculative and the practical parts of theology deal with different problems such as God the Trinity creation and the angels on the one hand and beatitude the virtue divine law sin grace and sacraments on the other But for Kant both speculative and moral theology deal with the problem of God s existence They differ only according to the manner in which the theoretic and the practical reason undertake to solve this problem

All attempts of reason to establish a theology by the aid of speculation alone are fruitless writes Kant Consequently a rational theology can have no existence unless it is founded upon the laws of morality The postulates of pure practical reason—of immortality free will and the existence of God— all proceed from the principle of morality which is not a postulate but a law by which reason determines the will directly The moral law involves as a necessary condition the existence of the *summum bonum* and that in turn involves the supposition of the supreme independent good that is the existence of God

According to Kant a Supreme Being is for the speculative reason a mere ideal though a faultless one—a conception which perfects and crowns the system of human cognition but the objective reality of which can neither be proved nor disproved by pure reason It is this defect which moral theology remedies We must assume he says a moral world cause that is an Author of the world if we are to set before ourselves a final end in conformity to the moral law But he adds this moral argument is not intended to supply an objectively valid proof of the existence of God It is not meant to demonstrate to the skeptic that there is a God but that he *must adopt* the assumption of this proposition as a maxim of his practical reason if he wishes to think in a manner consistent with morality

THE PROBLEM OF THE proof of God s existence though central in theology is more fully discussed in the chapter on GOD Here we are concerned with the nature of theology itself as a branch of learning or inquiry Since the chapter on METAPHYSICS necessarily touches on theology as a philosophical discipline it seems advisable to devote attention here to some of the things which are peculiarly the concern of sacred theology

Heresy is one of these A scientist or philosopher may be criticized for his errors but only a theologian only the man who tries to explain some article of faith can be called a heretic in the strict sense of that word According to his view of the relation between church and state Hobbes defines heresy in political terms Heresy he writes is nothing else but a private opinion obstinately maintained contrary to the opinion which the Public Person —i e the Sovereign— has commanded to be taught But according to Pascal none but God was able to instruct the Church in the faith and so it is heresy to resist the decisions of the faith because this amounts to an opposing of our own spirit to the Spirit of God" But he adds it is no heresy though it may be an act of presumption to disbelieve certain particular facts because this is no more than opposing reason—it may be enlightened reason—

to an authority which is great indeed but in this matter is not infallible

The aspect of choice of obstinately preferring one s own opinion against a superior authority is emphasized by Aquinas but he adds the specification that heresy is a corruption of Christian faith a species of unbelief in which the heretic defies the authority of the Church choosing not what Christ really taught but the suggestions of his own mind He quotes a statement by Augustine that we should not accuse of heresy those who however false and perverse their opinion may be defend it without obstinate fervor and are ready to mend their opinion when they have found the truth because they do not make a choice in contradiction to the doctrine of the Church It is not the falsity of the opinion which makes it heresy for until the point of faith has been defined by the authority of the Church theologians may differ and even be in error without being heretical

The inference may be drawn that progress is made in the refinement and precision of theological doctrine as the dogmas of a religion are more fully stated and the line between orthodoxy and heresy becomes more clearly defined Augustine who is one of the great formative theologians for the Protestant as well as the Catholic tradition devotes a large part of his writing to the criticism of heresies—the great Arian heresy concerning the Trinity the Nestorian or Monophysite heresy concerning the Incarnation the Manichean heresy concerning the existence of evil and the Pelagian heresy concerning grace and good works

While the hot restlessness of heretics Augustine writes stirs questions about many articles of the catholic faith the necessity of defending them forces us to investigate them more accurately to understand them more clearly and to proclaim them more earnestly and the question mooted by an adversary becomes the occasion of instruction According to Aquinas the profit that ensues from heresy is beside the intention of heretics for it consists in the constancy of the faithful being put to the test and makes us shake off our sluggishness and search the Scriptures more carefully

To Augustine and Aquinas theological argument and controversy seem to be serviceable in the propagation and defense of the faith Aquinas for example distinguishes the various types of dispute in which a Christian theologian can engage—with heretics with Jews with infidels We can argue with heretics from texts in Holy Scripture he writes and against those who deny one article of faith we can argue from another If our opponent believes nothing of divine revelation there is no longer any means of proving the articles of faith by argument but only of answering his objections—if he has any—against faith

But it is necessary to add the qualification that the reasons employed to prove things that are of faith are not demonstrations they are either persuasive arguments showing that what is proposed by faith is not impossible or else they are proofs drawn from the principles of faith *i e* from the authority of Holy Writ Whatever is based on these principles is as well proved in the eyes of the faithful as a conclusion drawn from self evident principles is in the eyes of all

Furthermore Aquinas points out since faith rests upon infallible truth and since the contrary of a truth can never be demonstrated it is clear that the proofs brought against faith are not demonstrations but arguments that can be answered Descartes seems to hold a similar view Defending his opinions in a letter to Father Dinet he declares As to theology as one truth can never be contrary to another it would be a kind of impiety to fear that the truths discovered in philosophy were contrary to those of the true Faith

A SOMEWHAT CONTRARY view of the relation of faith and reason seems to be taken by Locke Whatever God hath revealed he says is certainly true no doubt can be made of it This is the proper object of faith but whether it be a divine revelation or no reason must judge Reason not faith is the ultimate test of truth in theology as in philosophy Reason must be our last judge and guide in everything If reason finds something to be revealed from God reason then declares for it as much as for any other truth and makes it one of her dictates

In many of the great books we find a less

favorable view of the merit or profit in theological controversy Its excesses and mumbo jumbo are travestied and caricatured by Rabelais and Sterne its futility and folly are the subject of bitter complaint by Hobbes and Bacon its intolerance is condemned by Locke and Mill Gibbon who reports the disputes which raged through ten centuries of Christendom seldom speaks kindly of the disputants He refers to the exquisite rancor of theological hatred and in describing the fury of the conflict between the Arians and the defenders of the Nicene creed he says that in the midsts of their fierce contentions they easily forgot the doubt which is recommended by philosophy and the submission which is enjoined by religion

In the Middle Ages mystical theologians like Peter Damiani or Bernard of Clairvaux attack as impious or irreligious the kind of theology which borrows from the philosophers and makes use of the liberal arts especially the techniques of the dialectician In similar vein Protestant reformers like Luther later attack theology itself as detrimental to the purity of Christian faith and the spirit of religion It is in this vein also that Bacon deplores the unprofitable subtility or curiosity and the fruitless speculation or controversy in divinity and speaks of the extreme prejudice which both religion and philosophy have received and may receive by being commixed together

When the Student in *Faust* says I'm now almost inclined to try Theology Mephistopheles replies

> I would not wish to lead you so astray
> In what this science touches it would be
> So hard to shun the false misleading way
> So much of hidden poison lies therein
> You scarce can tell it from its medicine

That however is the voice of the devil and from the point of view of those who see no conflict between faith and reason or between piety and inquiry the attempt to separate religion from theology often looks diabolical

OUTLINE OF TOPICS

REFERENCES

To find the passages c ted use the numbers in heavy type wh ch are the volume and page numb rs of the passa es referred to For ex nple in 4 HO ER *Il ad* BK I [265 83] 12d the number 4 is the number of the volume in the set the number 12d ind cates that the pas sa e s in section d of page 12

PAG SECTION When the text is printed n o e column the letters a and b refer to the upper and lower halves of the p e For example in 53 JAM *P hology* 116 119b the passag b gins in the uppe half of page 1 6 and ends in th l er half of page 119 When the text is printed in two columns the lette s a and b refer to the upp nd lower h l es of the left ha d sid of the page the letters c and d to the upper a d lower halves of the right hand sid of the page Fo e ample in 7 PLATO *Symp sium* 163b 164c the passage begins n the lower half f the left hand side f page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S D VI ONS One or more of the main divis o s of a ork (such as PART BK CH S CT) are sometimes included in the r ference line numbers in brackets a e given in cer t in cases *e g Il ad* K I [65 283] 12d

BIBLE REFERENCES The references are to book chapter and verse When the King J mes and D uay ver o s differ in title of books or in the numb g of chapters or verses the King J mes vers n is cited first and the Douay ind cat d by a *(D)* follows *e g* OLD TESTA ENT *N hem ah* 7 45—*(D) II Esdras* 7 46

SYMBOLS The abbreviat on esp calls the eader s attent on to one or m e esp cially rele ant p rts of wh l r fer n pas im n fies that the top c is discussed intermit tently r ther than c ntinuou ly in the o k or passage c ted

Fo add tional formation concer g the style of the r f rences ee the Explanation of R fe e ce Style f r general guidance in the use of *The Gr t Ideas* consult the Prefac

1 The ubject matter of th ology the scope of ts nquiry the ng of i problems

7 PL TO *Republic* BK VII 388a 398c esp 389b 391b 397a 398c / *Laws* K X 757d 771b
8 AR TOTLE *M taphysics* BK I CH 2 [982b 8-983 11] 501a b BK VI CH I 547b d 548c e p [6 6-33] 548a c BK XI CH 7 [1 64 28 b13] 592d 593a
18 AUGU TINE *Co fe ons* BK II p r 13 7 47 52c / *City of G d* K VI CH 264b d 273a K XI CH 2 323 / *Christian Doctrine* BK I CH 40 655b 656
19 AQUIN *Summa Theologic* PART Q I 3 10 Q 75 REA E 378a b Q 84 AMBLE 440b-d PART Q 7 A 2 ANS a d P 3 652d 653c
20 AQU NAS *Summa Th ol gica* PART I I Q 71 A 6 R 5 110b 111b Q I A 4 ANS 354 355d
30 BA ON *Advancement f Learn g* 41b 42 95d 101c
31 D R S *D c se* PART 43c
33 P SCA *V cuum* 355b-356b
35 HUM *Huma U der t d g* T X DIV 132 509c
39 S TH *We lth f N ti ns* K V 336b 337a
42 KANT *Pu R a on* 33 d 119a c 176 -c 190a c 236b 240b esp 239 240b / *Practical Reas n* 349a 352c esp 350c 351a / *Judgement* 578 b

2 The d stinct on between n tur l and sac ed th ology its elation to the d stinction b tween rea on and fa th

18 AUGUSTIN *C fess n* K VII P r 3 7 47c 52c / *City of God* K VIII CH I I 264b d 273a BK XI CH 2 323a / *Christ a D ctrin* K II CH 4 655b 656 CH 4 656 d
19 AQUINAS *Summa Th ol gic* PART I Q I A - 3b-4c AA 4-6 5a 7a Q 2 A 2 R P I 11d 12 Q I AA 12 13 60d 62b Q 3 A I 175d 178a A 4 180b d Q 46 A 2 253a 255a Q 84 A 5 446c-447c
20 AQU NAS *S mm Th logica* ART II Q I A 5 383b 384b Q 2 AA 3 4 392d 394b A 10 399b-400b
23 HO ES *Lev than* PART I 66a
25 MONT IGNE *Ess ys* 208a 209 212 d 238d 239
30 BACON *Ad a ement of Lea g* 19b 39d 40c 41b 42a 96d 101c esp 96c 97 / *Novum O ga um* BK APH 65 114b c
31 D SC RTE *Rul s* 4d 5a / *D scou s* PART I 43c / *Meditat* 69 71 / *Obje t n and Replie* 125b 126 168b-169a 284d

(*The distinction between natural and sacred theology: its relation to the distinction between reason and faith.*)

32 MILTON *Paradise Lost* BK XII [552–587] 331a–332a

33 PASCAL *Pensées* 245 218b; 265 290 221b–225a; 543 266a; 561–563 272b–273a

35 LOCKE *Human Understanding* BK III CH IX SECT 23 291b-c; BK IV CH XVII SECT 23–24 380b-d; CH XVIII 380d–384b passim; CH XIX SECT 14 387d–388a

35 HUME *Human Understanding* SECT XII DIV 132 509c

40 GIBBON *Decline and Fall* 307a–309d esp 308c–309a; 346b-c

42 KANT *Practical Reason* 346b–347a; 349a–352c esp 350c–351a; 353a–354d / *Judgement* 599d–600a; 603b-d; 604d–606d esp 606a-d; 607d–609b

43 MILL *Utilitarianism* 455a-c

51 TOLSTOY *War and Peace* BK V 196a–197c

3 Theology as a philosophical discipline

3a Natural theology in relation to other parts of philosophy: *philosophia prima*, metaphysics, natural philosophy

7 PLATO *Republic* BK VII 388a–398c esp 389b–391b, 397a–398c / *Timaeus* 442a–477a,c esp 447a–453c, 455a–457b, 475d–477a,c

8 ARISTOTLE *Physics* BK I CH 9 [192a33–b2] 268c-d; BK II CH 2 [194b9–15] 271a; CH 7 [198a22–31] 275b-c / *Heavens* BK I, CH 1 [298b13–24] 390a-b / *Metaphysics* BK I CH 1 499a–501c esp CH 2 [982b28–983a11] 501a-b; BK VI CH 1 [1026a6–33] 548a-c; BK XI CH 7 [1064a28–b13] 592d–593a

16 PTOLEMY *Almagest* BK I 5a-6a

19 AQUINAS *Summa Theologica* PART I Q 1 A 8 ANS 7c-8d

23 HOBBES *Leviathan* PART IV 269b-c

30 BACON *Advancement of Learning* 2c-4c; 15d–16b; 39d-40c; 41b-42a; 43a-46a esp 44c-45a / *Novum Organum* BK I APH 65 114b-c

31 DESCARTES *Meditations* 69a–71a,c / *Objections and Replies* 283d–284d

33 PASCAL *Pensées* 7 186a

42 KANT *Pure Reason* 33a-d; 119a-c; 176a-c; 190a-c; 236b–240b esp 239a–240b / *Practical Reason* 349a–352c esp 350c–352 / *Judgement* 603d–613a,c esp 606d–607c

46 HEGEL *Philosophy of History* PART IV 368d–369a,c

3b The distinction between speculative and moral theology: theology as a work of the practical reason

4 KANT *Pure Reason* 236b–240b esp 239a–240b / *Practical Reason* 291a–296d; 349a–352c esp 350c–351a / *Judgement* 588a–613a,c esp 588a–592d; 593d–595c; 596c–598b; 604d–606d; 607d–609b

3c The limitations of speculative theology: the insoluble mysteries or antinomies

8 ARISTOTLE *Metaphysics* BK I CH 2 [983a28–983a11] 501a-b

18 AUGUSTINE *Confessions* BK VI par 6–8 36c–37c; BK VII par 13–27 47c–52c / *City of God* BK VIII CH 1, 12 264b-d, 273a; BK XI CH 2 323a-c

19 AQUINAS *Summa Theologica* PART I Q 2 AA 1–2 10d–12c; Q 12 A 12 60d–61c; Q 13 62b–75b; Q 32 A 1 175d–178a; Q 46 A 2 253a–255a; Q 88 A 3 472c–473a; Q 94 A 1 REP 3 501d–503a

21 DANTE *Divine Comedy* PURGATORY III [16–45] 56a-b

23 HOBBES *Leviathan* PART II 163a-b; PART III 165b

30 BACON *Advancement of Learning* 41b-d; 96d–97b

31 DESCARTES *Objections and Replies* 112a–114c; 123a; 127a-d; 168d–169a

33 PASCAL *Pensées* 185 195 205a–210b; 221–241 212a–217b; 243 253 218a–220a; 543 266a

35 HUME *Human Understanding* SECT VIII DIV 81 487a

40 GIBBON *Decline and Fall* 12d–13a; 159a-d; 186a-d; 308c-d

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4a The relation of sacred theology to philosophy: theology as the queen of the sciences

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Various attacks on theological doctrines and for criticisms directed against the kind of speculation which is theological *see* Dialectic 3c God 10-13 Immortality Knowledge 5c Metaphysics 2d Opinion 4b Philosophy 6b Religion 6f-6g Soul 3d Will 5c World 4a

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Listed below are works not included in *Great Books of the Western World* but relevant to the idea and topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collection
II Works by authors not represented in this collection

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Chapter 93 TIME

INTRODUCTION

DEVOURING Time wasteful Time this bloody tyrant Time —Time is the predatory villain with whom not only the lover but all men must contend The sonnets of Shakespeare make war upon Time s tyranny—to stay Time s scythe to preserve whatever of value can be kept from the wastes of time and to prove that Love s not Time s fool entirely

Yet viewing the almost universal depredations of Time the poet fears that love may not escape Time s ruin

When I have seen by Time s fell hand defaced
The rich proud co t of out orn bur ed age
When sometime lofty to vers I see do n ra ed
And brass eternal slave to mortal rage
When I have seen the hungry ocean gain
Advantage on the kingdom of the shore
And the f rm so l win of the aters m in
Increa ing store with loss and loss v th store
When I have seen such intercl nge of state
Or state itself confounded to decay
Ruin hath ta ght me thus to rum nate
That Time w ll come and take my lo e a ay
Th s thought is as a death h ch c n ot choose
But weep to ha e that hich it fears to lose

The lover knows that he cannot save h s love from change and her beauty from decay Time is too much for him But when the lover is also a poet he may hope to defeat Time not by making his love last forever but by making the memory of it immortal Do thy worst old Time he can say despite thy wrong My lo e shall in my verse ever live young Or again

Since b a s, n r stone nor earth nor boundless sea
But sad m tal ty o r sways the po
How ith this ra e shall be utv hold plea
Wh se act n is no st on er tha a fl er?
O ho hall s mm s hon y breath hold out
Ag n t the wreckf l eg of battering days
Wh n rocks impre nabl re not so tout
Nor g tes of steel so t ong b t T me decays?
O fearful meditation! where alack
Shall Time s best jewel from Time s chest lie hid?
Or what strong hand can hold his swift foot back?
Or who his spo l of beauty can forb d?
O none unless this miracle have might
That in black ink my lo e may still shine bright.

But the poet may have the cast of a theologian rather than a lover He may as Milton does stand not in awe or fear but in contempt of Time willing to wait while Time runs out its race Milton bids Time

glut thyself with what thy omb devours,
Which is no more than what is false and vain
And merely mortal dross
So little is our loss
So little is thy gain
For when as each thing bad thou hast entomb d
And last of all thy greedy self consum d
Then long Eternity shall greet our bl ss
With an individual kiss
The ı all this Earthly grossness quit
Attir d with Stars e shall f re er sit
Triumphin over Death and Chance and thee
O Time

A philosopher like Marcus Aurelius neither defies nor despises time He enjoins himself to accept the mutability of all things as fitting and suitable to universal nature Dost thou not see he asks himself that for thyself also to change is just the same and equally necessary for the universal nature? To him it seems no evil for things to undergo change nor is he oppressed by the image of Time as a river made up of the events which happen and a violent stream for as soon as a thing has been seen it is carried away and another comes in its place and this will be carried a vay too

For man to resign himself to time s passage Pascal thinks requires no special effort Our nature consists in motion le says comple e rest is death Time fits our nature not only because it heals griefs and quarrels but because time s perpetual flo vasl es away the

desperate ennui men suffer when they feel themselves imprisoned in the present

Just as we seek and multiply diversions as means to escape from ourselves so according to Pascal when we are dissatisfied with the present we anticipate the future as too slow in coming or we recall the past to stop its too rapid flight For the present is generally painful to us. Let each one examine his thoughts, and he will find them all occupied with the past and the future The past and present are our means the future alone is our end So we never live but we hope to live and as we are always preparing to be happy it is inevitable we should never be so

THESE ARE ONLY SOME of the conflicting attitudes toward time and mutability which express man s desire for permanence for the eternity of a now that stands still or his restless weariness his avidity for the novelties time holds in store Wherever in the great books of poetry philosophy or history men reflect upon their loves and aspirations their knowledge and their institutions they face man s temporality It is not that man alone of earthly things has a time ridden existence but that his memory and imagination enable him to encompass time and so save him from being merely rooted in it Man not only reaches out to the past and future but he also sometimes lifts himself above the whole of time by conceiving the eternal and the immutable

Man s apprehension of the past and future is discussed in the chapter on MEMORY AND IMAGINATION The bent of his mind or his striving toward the unchanging the everlasting the eternal is considered in the chapter on CHANGE Here we are concerned with his examination of time itself.

Though the idea of time is traditionally linked with that of space it seems to be much more difficult to grasp In addition to provoking opposite emotion from the poets it seems to engage the philosophers in a dispute about its intelligibility This goes deeper than conflicting definitions or analyses such as occur in the discussion of both space and time Whereas time seems no less clear than space to some thinkers to others it is irremediably obscure Struggling to say what it is and how it exists they are exasperated by its evanescence as an object of thought

Aristotle indicates some initial difficulties in the consideration of time It is not itself a movement yet neither does time exist without change Time is neither movement nor independent of movement Furthermore according to Aristotle time is a continuous quantity Time past present and future forms a continuous whole. But the very nature of a continuous quantity is to be divisible The present moment however—the now which is the link of time and the dividing line between past and future—seems to be an indivisible instant

If the present had an extended duration Aristotle points out it would have to include parts some of which would be past and some future Hence though the present seems to be a part of time it is unlike the rest of time indivisible and though it separates past and future yet it must also somehow belong to both for otherwise time would not be continuous The now is an end and a beginning of time not of the same time however but the end of that which is past and the beginning of that which is to come

If we conceive of some point of time which cannot be divided into even the minutest parts of moments Augustine writes that is the only point that can be called the present and that point flees at such lightning speed from being future to being past that it has no extent of duration at all Only past time and future time can be called long or short Only they have duration But in what sense Augustine asks can that which does not exist be long or short? The past no longer is the future is not yet

The past and future it seems have duration or at least extent but no existence. The present exists but does not endure What then *is* time? If no one asks me Augustine says I know if I want to explain it to a questioner I do not know All the words with which we speak of time and times are the plainest and commonest of words yet again they are profoundly obscure and their meaning remains to be discovered

Augustine returns again and again to the point that we measure time *in its passing* But he says if you ask me how I know this my answer is that I know it because we measure

time and we cannot measure what does not exist and the past and future do not exist But how do we measure time present since it has no extent and where does time come from and by what way does it pass and where does it go to while we are measuring it? Where is it from?—obviously from the future By what way does it pass?—by the present Where does it go?—into the past In other words it passes from that which does not exist by way of that which lacks extension into that which is no longer

The more he reflects on time and its measurement the more Augustine is perplexed the more he is forced to say I still do not know what time is He realizes that he has been talking of time for a long time and this long time would not be a long time unless time has passed But how do I know this since I do not know what time is? It seems to him true that we measure time and yet he must say I do not know what I am measuring It seems to him that time is certainly extendedness—but he must add I do not know what it is extendedness of

Berkeley suggests that the difficulties in understanding time may be of our own making Bid your servant meet you at such a *time* in such a place and he shall never stay to deliberate on the meaning of those words But if *time* be taken exclusive of all those particular actions and ideas that diversify the day merely for the continuation of existence or duration in the abstract then it will perhaps gravel even a philosopher to comprehend it

For my own part Berkeley goes on to say whenever I attempt to frame a simple idea of *time* abstracted from the succession of ideas in my own mind which flows uniformly and is participated by all beings I am lost and embrangled in inextricable difficulties I have no notion of it at all

To those who conceive time as a mathematical magnitude or as a physical dimension there seems to be no difficulty about its definition or a precise statement of its properties So considered time appears to be no less intelligible than space for when it is so considered it is being treated exactly like space—not as a property of things not as relative to bodies or their motions but as an extensive manifold capable of being occupied by things and in which they exist and move

As in what Einstein calls the four-dimensional space time continuum (which comprises three space coordinates and one time coordinate) time is merely one dimension among others so in Newton s theory time and space are also given parallel treatment Times and spaces Newton writes are as it were the places as well of themselves as of all other things All things are placed in time as to order of succession and in space as to order of situation Einstein criticizes Newtonian mechanics for its habit of treating time as an independent continuum yet Newton no less than Einstein appears to conceive time and space alike as dimensions even if he conceives them in separation from one another

But if time and space are something to be occupied or filled they can also be thought of as unoccupied or empty The opposition discussed in the chapter on SPACE between those who think of space in itself as empty and those who deny a void or vacuum seems to be paralleled here by the issue concerning empty time—time apart from all change or motion time in itself. Waiving for the moment the question whether such time exists or is only a mathematical abstraction we can see that this time may be more susceptible to analysis than the time of ordinary experience the time which according to Lucretius no one feels by itself abstracted from the motion and calm rest of things

Newton explains that he does not define time space place and motion because they are well known to all But he observes that men commonly conceive these quantities under no other notions but from the relation they bear to sensible objects He finds it necessary therefore to distinguish each of them into absolute and relative true and apparent mathematical and common

By absolute true and mathematical time Newton means that which of itself and from its own nature flows equably without relation to anything external and by another name is called duration In contrast relative apparent and common time is some sensible and external (whether accurate or unequable) measure of duration by the means of motion which

is commonly used instead of true time such as an hour a day a month a year In astronomy Newton points out absolute time is distinguished from relative by the equation or correction of the apparent time For the natural days are truly unequal though they are commonly considered as equal and used for measures of time astronomers correct this inequality that they may measure the celestial motions by a more accurate time.

Newton seems to be saying that time measures motion and also that it is measured by it If his distinction between absolute and relative time is ignored his theory of time does not appear to be very different from that of Aristotle who says not only do we measure the movement by the time but also the time by the movement Insofar as movement or change involves a sequence in which one part comes after another time measures it by numbering the *befores* and *afters* But we also judge the len th of the time according to the duration of the movement and in this sense the movement measures time

As both Aristotle and Augustine point out time measures rest as well as motion for in Aristotle s words all rest is in time Time is not motion but the number of motion and what is at rest can be in the number of motion Not everything that is not in motion can be said to be at rest —but only that which can be moved though it actually is not moved

But where Aristotle in defining time as the measure of motion or rest makes time an attribute of movement Newton regards absolute time as the perfect measure of motion precisely because its nature is independent of all physical change Only relative time depends on motion and that is the time which is measured by motion not the measure of it Those who confound real quantities with their relations and sensible measures Newton declares defile the purity of mathematical and philosophical truths

Distinguishing between duration and time Locke expresses in another way the difference between Newton and Aristotle Time for Locke is that portion of duration which consists of definite periods and is measured by the motion of bodies We must therefore carefully distinguish betwixt duration itself and the measures we make use of to judge its length Duration in itself is to be considered as going on in one constant equal uniform course but none of the measures which we make use of can be known to do so It seems wrong to Locke to define time as the measure of motion when, on the contrary it is motion— the motion of the great and visible bodies of the world —which measures time

What Locke calls duration seems to be the same as Newton s absolute time It is in no way relative to the existence of bodies or motion Just as space or as he calls it expansion is not limited by matter so duration is not limited by motion As place is that portion of infinite space which is possessed by and comprehended within the material world and is thereby distinguished from the rest of expansion so time is so much of infinite duration as is measured by and coexistent with the existence and motions of the great bodies of the universe

MANY ISSUES ARE RAISED by absolute time or infinite duration conceived as independent of all bodily motions Einstein for example challenges the classical notion of simultaneity according to which two events taking place a great distance from one another are said to occur *at the same time* that is at the same moment in the absolute flow of time

Before the advent of the theory of relativity he writes it had always been tacitly assumed in physics that the statement of time had an absolute significance *i e* that it is independent of the state of motion of the body of reference But if the world of physical events is a four dimensional manifold in which the time coordinate is always associated with the space coordinates for any reference-body under observation then every reference body (coordinate system) has its own particular time and Einstein adds unless we are told the reference body to which the statement of time refers there is no meaning in a statement of the time of an event

There is also the issue of the emptiness of that part of absolute time or infinite duration which comes before or after the existence of the world comparable to the issue concerning the void or empty space beyond the borders of the material universe Those who regard time as

relative to and inseparable from motion deny the possibility of such empty time

For Plato as for Christian theologians like Augustine and Aquinas time itself is created with the creation of the heavenly bodies and their motions As the story of the world s becoming is told in the *Timaeus* the maker resolved to have a moving image of eternity and when he set in order the heaven he made this image eternal but moving according to number while eternity itself rests in unity and this image we call time Time then and the heaven came into being at the same instant

Augustine undertakes to answer those who agree that God is the Creator of the world but have difficulties about the time of its creation He asserts that there is no time before the world For if eternity and time are rightly distinguished by this that time does not exist without some movement and transition while in eternity there is no change who does not see that there could have been no time had not some creature been made which by some motion could give birth to change I do not see Augustine continues how God can be said to have created the world after spaces of time had elapsed unless it be said that prior to the world there was some creature by whose movement time could pass But the existence of a creature prior to creation is impossible Hence Augustine concludes that if in the world s creation change and motion were created then the world and time were simultaneously created

Though the existence of a creature prior to creation is impossible it is not impossible according to Aquinas for the created world to be coeval with its Creator While he rejects the opinion of those who assert that the world now exists without any dependence on God and who deny that it was ever made by God he entertains as possible the view that the world has a beginning not of time but of creation Those who hold this view he explains mean that it was always made For just as if a foot were always in the dust from eternity there would always be a footprint which without doubt was caused by him who trod on it so also the world always was because its Maker always existed

It does not necessarily follow Aquinas admits that if God is the active cause of the world He must be prior to the world in duration because creation by which He produced the world is not a successive change But Aquinas does not think that the question whether the world and time began with creation or has always co-existed with its Creator can be resolved by reason The newness of the world he says is known only by revelation.

That the world did not always exist we hold by faith alone it cannot be proved demonstratively In saying this he is not unmindful of the fact that Aristotle advances arguments to show that there can be no beginning to either time or motion Since time cannot exist and is unthinkable apart from the moment and the moment is a kind of middle point uniting as it does in itself both a beginning of future time and an end of past time it follows that there must always be time But if this is true of time it is evident that it must also be true of motion time being an attribute of motion

With one exception all his predecessors according to Aristotle are in agreement that time is uncreated In fact he says it is just this that enables Democritus to show that all things cannot have had a becoming Plato alone asserts the creation of time saying that it had a becoming together with the universe But Aristotle s own arguments for the eternity of time and motion do not seem to Aquinas to be absolutely demonstrative but only relatively so—*vi* as against the arguments of some of the ancients who asserted that the world began to be in some actually impossible ways As for the present moment or the *now* of time always requiring something which comes *before* as well as *after* Aquinas admits that time cannot be made except according to some *now* yet not because there is time in the first *now* but because from it time begins

The position of Aquinas that arguments for the initiation or the endlessness of time are only dialectical seems to be confirmed by Kant In the Transcendental Dialectic of the *Critique of Pure Reason* Kant sets forth as one of the cosmological antinomies the opposed arguments for the beginning of the world and for a world without beginning The reasoning on either side being equal in its *appearance* of cogency nei

ther conclusion according to Kant is genuinely demonstrated

But those who like Newton and Locke separate absolute time or infinite duration from the existence of a world in motion seem to be unaffected by arguments which concern only the time of the material world the time that is relative to motion For them absolute or infinite time is eternity It may be empty of motion but it is filled with God s everlasting being Though we make duration boundless as certainly it is Locke writes we cannot yet extend it beyond all being God every one easily allows fills eternity God is not eternity says Newton but He is eternal His duration reaches from eternity to eternity He endures forever and is everywhere present and by existing always and everywhere He constitutes duration and space

The issue is again brought into focus by the denial that God s eternity can be identified with infinite or absolute time Even supposing that the world always was Aquinas writes it would not be eternal in the sense in which God is for the divine being is all being simultaneously without succession He distinguishes the *now* that stands still as the eternal present from the continually shifting *now* in the flow of time s passing moments For him God s everlasting being does not endure through endless time but rather exists unchanging in the eternal present As eternity is the proper measure of being so time is the proper measure of movement and hence Aquinas writes according as any being recedes from permanence in being and is subject to change it recedes from eternity and is subject to time

THE TWO MEANINGS OF eternity—infinite time and utter timelessness—are discussed in the chapter on ETERNITY The distinction between time and eternity which is considered both there and here seems to be understood differently by those who contrast timelessness with temporality and by those who equate eternity with endless time For the latter the point of difference between eternity and time seems to be only one of infinite as opposed to limited duration Yet as we have just observed writers like Newton and Locke also distinguish absolute or infinite time (which they tend to identify with eternity) from definite periods or limited spans of time by making the one independent of the other relative to and measured by motion

The question remains whether absolute time is real time or only a mathematical abstraction whether it exists apart from perceived time—the experienced duration of observable motions or the elapsed time of events in succession

Considering this question Kant says that those who maintain the absolute reality of time and space whether as essentially subsisting or only inhering as modifications in things must find themselves at utter variance with the principles of experience itself For if they decide for the first view and make space and time into substances this being the side taken by mathematical natural philosophers they must admit two self subsisting nonentities infinite and eternal which exist (yet without their being anything real) for the purpose of containing in themselves everything that is real If they adopt the second view of inherence which is preferred by some metaphysical natural philosophers and regard space and time as relations abstracted from experience they find themselves in that case necessitated to deny the validity of mathematical doctrine *a priori* in reference to real things

On Kant s own view the synthetic judgments of mathematics can have the apodictic certainty of *a priori* propositions only if space and time are themselves *a priori* forms of intuition As the *a priori* form of space makes possible the pure science of geometry according to Kant so the *a priori* form of time makes possible the pure science of numbers *i e* arithmetic But whereas space as the pure form of external intuition is limited to external phenomena alone time as the form of the internal sense is for Kant the formal condition *a priori* of all phenomena whatsoever

Without sharing Kant s theory of *a priori* forms of intuition or of the foundations of pure mathematics other writers appear to agree to some extent with his denial of independent reality to time Aristotle raises the question whether if soul did not exist time would exist or not He thinks the question may be fairly asked because if there cannot be someone to count there cannot be anything that can be

counted so that evidently there cannot be *number* —*for number* is the counted or the countable But if nothing but soul or *in soul* reason is qualified to count there would not be time unless there were soul Yet Aristotle qualifies this somewhat by adding that *if mo e- ment* can exist without soul and the before and after are attributes of movement time may exist as these *qua* numerable

Augustine takes a less qualified position Ask *ing* v hat it is that time is the extendedness of he answers Probably of the mind itself *Insisting* that neither future nor past time can be *m asured* because neither exists Augustine *concludes* that it is only passing time we can *measure* and that we can measure it only in the *mind* It is in you O my mind he says that I *measure time* What I measure is the im press *produced* in you by things as they pass and abiding in you when *they* have passed I do not measure the things *themselves* whose passage produced the *impress* it *is* the impress that I measure when I measure *time*

Yet William James while *giving a similar* analysis of our experience of time insists that *time is objective* as well as subjective Time and space relations he writes *are* impressed from without The time and space in which the objects of our *thought exist* exist as inde pendently of the mind as *do those objects* them selves *The time- and space-relations between things do stamp copies within* as for example when things sequent in time impress *their* se quence on our memory

WILLIA I JAMES PROPOSES a solution of the *mys* tery of how time exists—at least how *it exists* in experience So far as our experience *goes* past and future can exist only in the present But how *can these* extended parts of time exist in the present if *the present is* but a fleet ing moment without any *extent of duration* gone as James says *in the instant* of be coming ? *His answer is in* terms of something he calls the *specious present*

Unlike the real *present* the *spe ious* present is no knife edge but a saddle back *with* a cer tain l readth of its own on which we *sit perched* and from wh ch we look in two directions into *time* Th unit of composition of our percep tion of *time is a d ration* with a bow and a stern as it were—a rearward and a forward-looking end It is only as parts of this *duration-block* that the relation of *succession* of one end to the other *is perceived*

On the basis of some experimental evidence James *estimates* that the specious present may vary in length from a few *seconds* to probably not more than a minute It has a vaguely vanishing backward and forward fringe but its nucleus is probably the dozen seconds or less that have just elapsed

The irreversible flow of time—the succession of moments which constitute the motion of the future through the present into the past—occurs in the specious present though not accord ing to James without the accompaniment of observed or experienced change Awareness of *change* is the condition on which our per ception of time s flow depends But that awareness must take place in the specious pres ent with its content perceived as having one part earlier and the other part later In conse quence James considers the specious present to be not only the original intuition of time but also *the original paragon prototype of all concei ed times*

THE PROBLEMS OF TIME its own process and being as well as its relation to all other existence and change its character as an aspect of ex perience and as an object of thought seem to belong to many subject matters—to psychology and to experimental or mathematical physics, to the philosophy of nature metaphysics and theology

For some thinkers—in our own time notably Bergson Whitehead and Dewey—the concep *of time* of the burgeoning future of the con tinuum of events seems to determine a whole philosophical outlook If it is not equally de cisive throughout the tradition of the great books it is at least of critical significance in speculations about the origin and end of the world in the contrast between physical and spiritual modes of being in the consideration of the processes of life thought and feel ng and in the analysis of more inclusive concepts such as that of order

The temporal relat onships of succession and simultaneity for example may be the s urce from which we derive the notions of prior pos

terior and simultaneous but they are traditionally viewed as exemplifying rather than exhausting these types of order When Augustine deals with the perplexing theological question of the priority of eternity to time he finds it necessary to distinguish priority in eternity priority in time priority in choice priority in origin

When Aristotle deals with metaphysical questions concerning the order of cause and effect of potentiality and actuality of essence and accident he differentiates between temporal and logical priority and between priority in thought and priority in nature When Harvey tries to solve the familiar biological riddle (which came first the chicken or the egg?) he also finds his solution in a distinction The fowl is prior by nature he writes but the egg is prior in time

Space and spatial relationships no less than time and the temporal figure in the general analysis of order or relatedness and have a bearing on other problems in physics and philosophy But in addition to time s having more significance than space for the theologian time also has peculiar importance for one subject matter in which space is of much less concern namely history and the philosophy of history

Besides the general view which the historian takes of time as the locus of history or the medium in which the pattern of history unfolds the writer of history usually employs certain conventional time divisions to mark the major phases or epochs of the story he has to tell Clocks and calendars record or represent the passage of time in conventional units but these conventions have some natural basis in astronomical time solar or sidereal In contrast the distinction between historic and prehistoric time or the division of history into such periods as ancient mediaeval and modern seems to be purely a matter of social or cultural convention

With Hegel however the division of the whole of history into three epochs and of each epoch again into three period follows from the dialectical triad of thesis antithesis and synthesis which is the underlying form of history s development The divisions of each of the three phases of world history—the Oriental the Graeco Roman and the German worlds—into a first second and third period produces in each case the same pattern of origin conflict and resolution For the most part Hegel does not identify these three periods with ancient mediaeval and modern times yet in one case that of the German world he does refer to the second period as the middle ages and the third as the modern time

Such words as ancient and modern have conventional significance for most historians Furthermore the meanings of modernity and antiquity are themselves subject to historical relativity In the tradition of the great books this appears most plainly in the references made to ancients and moderns by writers whom we today classify as ancient and mediaeval

Thucydides for example begins his history with a description of what is for him the antiquity of Greece Nicomachus opens his *Introduction to Arithmetic* with a remark about the ancients who under the leadership of Pythagoras first made science systematic defined philosophy as the love of wisdom Mathematics Aristotle says has come to be identical with philosophy for modern thinkers

In another place Aristotle contrasts the thinkers of the present day with the thinkers of old and in still another he speaks of ancient and truly traditional theories Like Aristotle in the sphere of thought so Tacitus in the sphere of politics frequently compares ancient and modern institutions or practices

In the Middle Ages Aquinas speaks of the teachings of the early philosophers and as frequently as Aristotle he refers to ancient and modern doctrines In the Renaissance Kepler treats as ancient a scientist who in point of time comes much later than those whom Aristotle and Aquinas call modern Classifying three schools of astronomical thought he distinguishes an ancient one which had Ptolemy as its coryphaeus from two modern ones respectively headed by Copernicus and Tycho Brahe

Such references which have occurred in all three periods of the western tradition suggest the probability that at some future date the whole tradition with which we are now acquainted will be referred to as the thought and culture of ancient times

OUTLINE OF TOPICS

REFERENCES

T find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to Fo example in 4 HOMER *Il ad* K II [265 283] 12d the number 4 is the number of the volume in the set the number 12d ind cates that the passage is in se tion d of page 12

PAGE S TION When the text is p nted in one column the letters a and b refer to the upper d lower halves of the p ge For example in 53 JA P ych logy 116a 119b the passage beg s in the upp r half of pa e 116 and ends in the lo er half of p ge 1 9 When the text is p inted n two columns the lette s a and b refer to th upper and lower halves of the left hand s de of the pa e the letters c and d to the upper and lower h lves of the right hand side of the page Fo example in 7 PL o *Symp ium* 163b 164c the passage beg ns in the lower half of the left hand s de of pa e 163 and ends in th upper half of the right hand side of page 164

AUTHOR D VI IONS One or more of the main divi o of a work (such as PART BK CH SE T) a s metimes incl d d n the reference l ne numbers in brackets a given i cer tain cases *e g Il ad* K II [265 83] 12d

BI RE NCES The ref r ces re to book chapter and ve se When th King J mes nd Douay rsions diffe in t tl f books o in the numbe i g of chapt rs or verses the King Jam s v sion is cited fi t and the Dou y indicated by a (D) foll ws *e g* OLD TESTA M *N hem ah* 7 45—(D) *II E d* 7 46

SYM OLS The abbreviat n esp calls the reader s attent n to one o more especially r levant parts of a whol reference p ss m signifies that the top c is d scussed ntermit tently rath r than cont n ously in th work or pass g cited

For add t onal i formation concerning th tyle of the references, see the E pl nat on of Ref rence Styl f r gener l guidance in the use of *Th Great Ide* consult the Pr face

1 Th n tur of time t me as dur tion or as the me re of mot on time as a con t n ous quant ty absol te and rel ti e t me

7 PLATO *T m u* 450 -451d

8 AR TO E *C tegories* H 6 [5 6-14] 9b c / *Physics* K IV CH 10- 4 297 304 BK VI 312b d 325d p m / *Generat on a d C rr p t* BK I CH [337ª2 34] 439b / *Meta phy ics* BK V CH 3 [10 ª25 33] 541c BK XII H 6 [7 ᵇ6-12] 601b

17 P O INU *Th d E n d* TR VII H 8 13 123b 129a / *S xth En d* TR I CH 5 254 d H 16 260d 261

18 AU U TIN *C fessio s* BK X p r 17 40 93b 99 BK X par 8 101b / *C ty of God* K XI CH 6 325c d K X H 15 351b-352d

19 AQU NAS *Summa Theol g ca* PART Q 7 3 EP 4 32 33 Q O A AN 40d 41d A 4 43b-44b A 6 AN 45c 46d Q 53 A 3 283b-284d Q 57 A 3 R 297b 298a Q 63 A 5 NS 329a 330 A 6 EP 4 330 331c Q 66 A 4 RE 4 348d 349d RT I II Q 31 A ANS and RE 753 754

20 AQUINAS *S mma Th l gic* PAR II Q 113 A 7 R 5 366 367 PART I I UP L, Q 84 A 3 985d 989b

28 GA LEO *Two N w Sc en s* TH RD DAY 201 202a

31 DES ARTES *Object ns and Repl e* 213b c

31 SP NOZ *Eth* P RT I D 8 355c RO 21 364a PAR II D 5 373b c PROP 45 S HOL 390b ART II PRO 8 399b PART V PROP 3 458b d

33 I SCAL *Ge m t al Demonstr tio* 432b-435b

34 N WTON *P ple* D IN T ON SCHOL 8b 9b 10a 12 b K I L MMA II S HO 31b 32a

35 LOCKE *Human U d r t d ng* K II CH XIV 155b 162a P CT 21 2 159b d CH XV 162b 165c pa m

35 B KEL Y *Hun an K ul dge* SECT 97-98 431d 432

35 HUM *Hum Underst d ng* S CT XII DIV 124 506 507a sp D V 5 506d

36 STE N *T i t am Sh dy* 292 293

42 KANT *Pu Reason* 26b 33d e p 26d 28 b 74b 76c

46 H *Ph los phy of H tory* NTRO 188c 189b 206c

53 JA *Ps h logy* 399a b 407a

2 The distinction between time and eternity the eternity of endless time distinguished from the eternity of timelessness and immutab lity

APOCRYPHA *Ecclesiasticus* 1 2 18 10—(D) OT *Eccles asticus* 1 2 18 8

7 PLATO *Timaeus* 450b-451d

8 ARISTOTLE *Physics* BK IV CH 12 [221 19]-CH 13 [2 2b29] 301a 302c BK VI CH 2 [233 13 b16] 315a c CH 7 [23 b23 238 19] 321a c CH 10 [41b11 20] 325d BK VIII CH 1 2 334a 337b CH 6 344b 346b CH 8 348b 352a / *Hea ens* BK I CH 12 372d 375d esp [282 22-283a2] 373d 374c [283b7 22] 375c d BK II C 1 3 [286 8-13] 377c / *Generation and Co r p t n* BK II CH 9 [335 33 b2] 436d 437a / *Met physic* BK V C 1 5 [1015b9-16] 536a BK IX CH 8 [1050b6-2] 576b d BK XI CH 10 [106 33 38] 596a BK XII CH 6 [10/1b2 11] 601b C 1 7 [1072 18 23] 602a b [1073 3 11] 603a b BK XIV CH 2 [1088b14 28] 620d 621a

12 AURELIUS *Meditat ons* BK VI SECT 15 275a b SECT 36 277c

16 KEPLER *Harmon es f the World* 1071b

17 PLOTINUS *F t Ennead* TR V C 1 7 20a c / *Third Ennead* TR II 119b 129a / *Fou th En n ad* TR IV 1 7-8 161d 162d C 1 15 16 165c 166b

18 AUGUSTINE *C nfe ns* BK VII par 21 49d 50a BK XI 89b 99b esp par 8 17 91b 93c pa 39-41 98c 99b BK XI par 13 20 102a 103d par 40 109b 110a BK XI par 44 122d / *Cit f G d* BK X C 1 5-6 324d 325d C 1 21 333 d BK XII CH 12 19 349b 355a

19 AQUIN S *Summa Theol gica* P RT 1 Q 10 A 1-5 40d-45c C P A 1 REP 5 40d 41d A 2 REP 2 41d 42 A 3 R 42c 43b A 4 43b 44b Q 14 A 9 AN 83b d A 13 ANS and REP 3 86d 88 Q 42 A 2 REP 2 4 225d 227a Q 46 A 2 REP 5 253a 255a Q 79 A 8 REP 2 421c-422b

21 D TE *D n Com dy* PURG TORY XI [06-108] 69d PARAD E XXIX [10 45] 150b c

23 HO E *Letta h n* AR 271b

25 MONT IGNE *I* 292d 294a

29 CERVA TES *Don Qu x t* RT 1 366d 367a

30 B ON *N vum O g n m* BK I P 1 48 110d 111a

31 D R E *Obj n a d R p* 216d 217a

31 S I OZ *Eth* R DEF 8 3 5 I RO 20 R L 364a P R P 44 COR 2 and DE ST 390 R 23 458b d R 29 D T 459c PR 34 CI L 460d

32 MILTON *On Time* 12 b / *Pa ad se Lost* BK VI [0-9] 218b 219a BK XII [553 556] 331a

33 P *P* 195 5 of 211a

34 N WTON *Pr ci les* DEF ITIO SC IOL 8b

35 LOCKE *Human Understand ng* BK II CH XIV SECT 26-27 160c 161a SECT 30-31 161c 162a CH XV SECT 3-8 162d 164b SECT 11 12 165a c CH XVII 167d 174a passim C P SECT 5 168d 169a SECT 10 170b c SECT 16 172a b CH XXIX SECT 15 237a

42 KANT *Pure Reason* 26d 130b-133c 135a 137a c 152c 160b 161d 185a b

46 HEGEL *Philosophy of Hi tory* INTRO 190a b 206c

51 TOLSTOY *W ar and Peace* BK VII 295b-c

2a Aeviternity as intermediate between time and etern ty

18 AUGUSTINE *Confessions* BK XII par 9 101b c par 12 15 101d 102c par 18 22 103b 104b / *C ty of God* BK XII CH 15 351b 352d

19 AQUINAS *Summa Theologica* PART I Q 10 A 2 REP 1 2 41d 42c A 3 ANS 42c-43b A 4 5-6 44b-46d

2b Arguments concerning the infinity of time and the eternity of motion or the world

OLD TESTA ENT *Genesis* 1 1 2 / *N hemiah* 9 6—(D) *II Esd as* 9 6 / *Job* 38 1 13 / *P alm* 90 2 95 4-5 102.25 6 104 5-6 119 90-91 136 5-9 148 1-6—(D) *P alms* 89 2 94 4-5 101 26-27 103 5-6 118 90-91 135 5-9 148 1-6 / *P overbs* 3 19 8.22 29 / *I a ah* 45 12 18 48 13 65 17 25—(D) *I a a* 45 12 18 48 13 65 17 25 / *Jeremiah* 51 15—(D) *Jeremias* 51 15

A OCRYPHA *W sd m of S lomon* 7 17 18—(D) OT *B ok of W sdom* 7 17 18 / *Eccles asticus* 23 19 20 24 9—(D) OT *Eccle sa ticus* 23 28 9 24 14 / *II Maccabees* 7 23—(D) OT *II Machab e* -23

NEW TESTAMENT *Matth* 13 24 30 36-43 49-50 24 3 35 / *Ma k* 13 3 33 / *Luke* 21 5 33 / *J hn* 1 1 3 / *C lossians* 1 16-17 / *Hebrews* 1 10-12 / *II P ter* 3 3 13 / *Re lation* 10 5 6—(D) *Apocalypse* 10 5-6

7 PLATO *Phaed us* 124b-c / *Timaeus* 447b-c 450c-451a 460c d

8 ARISTOTLE *Topics* BK I CH 11 [104b13 18] 148a b / *Ph s s* BK IV CH 13 [222 29-b8] 302b BK VI CH 10 [241a27 b20] 325b-d BK VIII CH 1 2 334a 337b CH 6 344b 346b CH 8 348b 352a / *Hea ns* BK I CH 2 [269b2 10] 360 d CH 3 [270b1 26] 361c 362a C 1 9 [27] 2]-CH 12 [283b23] 370b 375d BK I CH 6 [288 23 25] 379d / *Generat o and Corrup t n* BK II CH 10 11 437d-441a c / *M taphys ogy* BK I CH 14 [352 16-353 27] 458b 459a BK II CH 3 [356b2 357a4] 462b d / *Met physics*, BK X CH 8 [105 b 0-28] 576c d BK XI C 6 [1 63 13 16] 591b CH 10 [106 33 38] 596a BK XII CH 6-8 601b 605a esp CH 7 [1072 19 b14] 602a d [1073 5 11] 603b

9 ARIST TLE *M t n of An mals* CH 4 [699b15 700a6] 234d 235a CH 6 [00b29-7 a7] 236a b

2c The cre t on of t me the p ority of eternity to time the immutab l ty of the world after the end of t me

3 The mode of existence of time

3a The p rt of t me it di on into past p esent nd future

(6 *The knowledge of time and the experience of duration*)

6b Factors influencing the estimate of time elapsed empty and filled time illusions of time perception the variability of experienced durations

6 HERODOTUS *History* BK II 77a b
8 ARISTOTLE *Physics* BK IV CH II [218b21–219 1] 298c d
18 AUGUSTINE *Confessions* BK XI par 36 98a
21 DANTE *Divine Comedy* PURGATORY I [1–18] 57c
26 SHAKESPEARE *Richard II* ACT I SC III [258–261] 326b / *As You Like It* ACT III SC II [319–351] 612 d
35 LOCKE *Human Understanding* BK II CH XIV SECT 4 155d 156a SECT 7 12 156 157c
36 STERNE *Tristram Shandy* 292a 293a
53 JAMES *Psychology* 264b 268a esp 268b 269b [fn 2] 400a-411a esp 408a-411a 417a 420a esp 418a 420a
54 FREUD *Interpretation of Dreams* 147d 148a 164c 335b 336d

6c Time as a transcendental form of intuition the a priori foundations of arithmetic the issue concerning innate and acquired time perception

35 LOCKE *Human Understanding* BK I CH XIV SECT 2 4 155b 156a SECT 31 161d 162a
42 KANT *Pure Reason* 26b 29d 61a 62d 68a 69c esp 68c 69a 94b 95d 100d 101b 213d 215a / *Practical Reason* 307d 308b 313a d
53 JAMES *Psychology* 420a b 852b 853a 860b-861a
54 FREUD *Beyond the Pleasure Principle* 648a b / *New Introductory Lectures* 837c

6d The signifying of time the distinction between noun and verb the tenses of the verb

7 PLATO *Timaeus* 450 -451a / *Parmenides* 495a / *Sophist* 575d 576b
8 ARISTOTLE *Interpretation* CH 2 [16 19–20] 25b CH 3 [16b6–19] 25d
19 AQUINAS *Summa Theologica* PART I Q 3 A 1 ANS 73 74b Q 14 A 15 REP 3 89b 90b
25 MONTAIGNE *Essays* 293d 294a

6e Knowledge of the past the storehouse of memory the evidences of the past in physical traces or remnants

6 HERODOTUS *History* BK I 1a 2b
6 THUCYDIDES *Peloponnesian War* BK I 349a 355 passim
7 PLATO *Laches* 36c / *Critias* 479d / *Theaetetus* 538d 544a
8 ARISTOTLE *Memory and Reminiscence* 690a 695d esp CH I [449b3 29] 690a-c
9 ARISTOTLE *Rhetoric* BK II CH 19 [139 b14 34] 640b-c
12 LUCRETIUS *Nature of Things* BK I [449-48] 6c 7a
15 TACITUS *Annals* BK II 38d 39a
17 PLOTINUS *Fourth Ennead* TR VI CH 3 190b-191c
18 AUGUSTINE *Confessions* BK X par 1 36 74b 80d esp par 23 25 77a d
19 AQUINAS *Summa Theologica* PART I Q 8 A 4 ANS 411d-413d Q 79 A 6 s and REP 2 419b 420d
20 AQUINAS *Summa Theologica* PART III Q 12 A 1 REP 3 776c 777b
23 HOBBES *Leviathan* PART I 53c 54a 65b-c
25 MONTAIGNE *Essays* 41c d 439c-440a 483b-484b
30 BACON *Advancement of Learning* 32d 61d 62c
31 SPINOZA *Ethics* PART IV DEF 6 424b PART V PROP 21 458a
35 LOCKE *Human Understanding* BK II CH X SECT 12 165b-c BK IV CH XI SECT II 357b-c
36 SWIFT *Gulliver* PART II 79a-80a
38 ROUSSEAU *Social Contract* BK IV 428a
40 GIBBON *Decline and Fall* 88 d 96b d 413b d
41 GIBBON *Decline and Fall* 337c
42 KANT *Judgement* 579d 580a 583d 584c
44 BOSWELL *Johnson* 151c
46 HEGEL *Philosophy of History* INTRO 153a 156d 181b 182c 190a b PART I 237a b 239c 241a 247b c
47 GOETHE *Faust* PART I [5 0-583] 16a
49 DARWIN *Origin of Species* 13c 14a 42a 152 180d passim esp 153a 156a 160d 162a 165d 166a c 179b 180d 217b 229a c passim esp 229c 231d 233b 238b 239 242c 243a / *Descent of Man* 255a 265d esp 255a b 265a d 332b 335a esp 332b-c 335a 336c 337a 348d 349d
50 MARX *Capital* 86c
53 JAMES *Psychology* 145a 396a 39 a 421a 427a esp 424b-425b
54 FREUD *Origin and Development of Psycho Analysis* 4a b / *General Introduction* 526c 527c 599a b / *War and Death* 60a b / *Civilization and Its Discontents* 769a 770c

6f Knowledge of the future the truth of propositions about future contingents the probability of predictions

5 SOPHOCLES *Oedipus the King* [463–512] 103c-d
5 EURIPIDES *Medea* [14 5 1419] 224c / *Alcestis* [1159 1163] 247c / *Helen* [1688 1692] 314c / *Andromache* [1284 1288] 326c / *Bacchantes* [388 1392] 352a c
6 THUCYDIDES *Peloponnesian War* BK I 354c
7 PLATO *Laches* 36c / *Theaetetus* 531a 532a
8 ARISTOTLE *Interpretation* CH 9 28a 29d

9 ARISTOTLE *Rhet ric* BK II CH 19 [1393 1-8] 640c
10 H POCRATES *Prognostics* par 1 19a b / *Epi demi s* BK III SECT II par 16 59b c
16 CO ERNICUS *Revolutions f the He venly Spher s* 505a 506
18 AUGUSTINE *Co fessio s* K XI par 23 25 94c 95a / *Christ a Doctrine* K II CH 30 651c d
19 AQUINAS *S mma Th logica* PART I Q 14 A 13 86d 88c Q 57 A 3 297b 298a Q 86 A 4 463d-464d Q 89 A 3 REP 3 475d 476c A 7 REP 3 478d 479c
20 AQUINAS *Summa Th logica* PART III Q 12 A 1 R 3 776 777b
21 DANTE *Di e Comedy* PARADIS XVII [13-45] 132b c
23 HO ES *Lev than* PART I 53c d 65b c
31 SP NOZ *Eth ics* PART II PROP 30-31 385a P RT IV DEF 6 424b PROP 62 SCHOL 443c d PROP 66 D NST 444
34 NEWTON *Principl s* 1a 2a BK III RULE IV 271b G NERAL SC IOL 371b 372a
34 HUY NS *L ght* PREF 551b 552a
35 LOCKE *Human U der t d ng* K II CH XV ECT 12 165b c
35 BE KEL Y *Huma Knowl dge* SECT 44 420d 421a S CT 5 433b
35 H *Hum n U der tand g* SECT V VII 458 -478a pa im p SECT IV DIV 21 458b-c S CT VI 469d 470d
44 BOSWELL *Johns* 277c
45 FOUR ER *Theory of He t* 177a b 184a
47 GO THE *Faust* PART I [859 -86 3] 209b
48 MELVILLE *M by Di k* 366b
49 DARWIN *O ig n of Sp ies* 59d 60 243b c
51 TOLSTOY *War a d Pea* BK X I 584d 585b E IL GU II 685a
53 JAM *Pychol gy* 852b 883 884b
54 FR U *Interpret t n of D ams* 387a c

7 The tempor l co se of the pass on emo t on l att tudes toward time and mut b lity

5 S O S *O dipus at Colonus* [6 7-623] 120 [I I 48] 125b-c
5 EU P E *Trojan W m n* [643 683] 275 d
6 HE ODOTUS *Hi to y* K I 7b 8 K VII 224d 225
7 PLATO *Sympos m* 154d 155a 165b 166a / *R pi blic* BK 295d 296c / *Tl eaetetus* 528c 529 / *Laws* K V 717d 718d
8 A I TOT E *T pic* BK III CH 2 [7 6-34] 164a
9 AR ST TLE *P t of Anim ls* BK II 6 [669 8 0] 197 / *Eth* BK H 3 [1 94 28 1 95] 340 b H 9 [1099b3 -1 0 9] 345b c K IV CH 9 [8 5] 376a BK VI I 8 [14 2 19] 391b c II [143b6 4] 393a BK VII CH 3 [1147 8 24] 397b 14 [54b 8 5] 406 [1 54b20-3] 406c BK VIII CH 3 [1 56a22 b5] 407d 408a CH 6 [1158 1-9] 409d / *Rhetoric* BK II CH 3 [1380b5-7] 626a CH 12 14 636a 638a
10 HIPPO RATES *Fractu es* par 1 74b d 75a
12 LUCRETIUS *N ture of Things* BK II [1105 1174] 29a 30 BK III [912-977] 41d-42c [1053 1094] 43c-44 C BK IV [1 58 1072] 57d 58 BK V [170 173] 63b
12 AURELIU *Meditat ons* BK II SECT 3 257a b SECT 12 258b c SECT 14 258d SE T 17 259b d BK III SECT 14 262c BK IV SECT 3 263b 264a SECT 5 264b SECT 32 33 266b d SECT 35 36 266d S CT 42 43 267b K V SECT I 270c d BK V SECT 5 275a b BK VII ECT 18 281 SECT 35 282a BK VIII SECT 6 285d 286a BK IX ECT 9 293b SECT 21 293b c K X SECT 7 297b c SECT 27 299d K XI SECT 27 306b
13 VIRGIL *Aeneid* BK I [441 462] 115a b c p [46] 115b
14 P UTARCH *Aem lius Paul is* 225b 229a c
17 PLOTINUS *Fi st E n d* TR IV CH 4 14
18 AUGU TINE *C fessions* BK IV par 10 21c d par 13 22c d BK V II pa 18 57d 58a par 25 26 60a b BK IX par 32 34 70 d
19 AQUINAS *Summ Theol g ca* PART I II Q 4 A 6 796c 797a
21 DANTE *Di ine C medy* HELL VII [61-96] 10b c XIV [94 120] 20 d XV [2-99] 21b 22a XXVI [90 142] 39a-c URGATORY XI [73 17] 69 70 XIV [91 126] 74c 75a XXVIII [134 44] 97c PARAD XV XVI 128b 132a XXVII [2 148] 148c d
22 CH UC R *Troilus and C ida* K III STAN 122 4 70b / *W fe of Bath P l gue* [5583-6410] 256a 269b
23 HO BES *Levi tha* ART I 63d 79c d ART II 150c 154b c PART IV 271d
25 MONT GNE *E ys* 6d 7a 33b 36a 292d 294b 394a 395b 403d 404b 458b c 478 479c 540d 541
26 SHAKES EARE *Richard II* CT I SC III [258-261] 326b ACT V SC V [41-66] 350 b / *1st Henry IV* ACT V S IV [77-86] 465 b / *2 d Henry IV* ACT SC [45-56] 483b / *Henry V* ACT SC I [22 69] 533b c / *As You Like It* ACT I I SC I [3 9 351] 612 d
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Chapter 94 TRUTH

INTRODUCTION

NOT everyone knows Josiah Royce s definition of a liar as a man who willfully misplaces his ontological predicates but every one who has ever told a lie will recognize its accuracy To restate the definition less elegantly lying consists in saying the contrary of what one thinks or believes To speak truthfully we must make our speech conform to our thought we must say that something is the case if we think it is or that it is not if we think it is not If we deliberately say is when we think *is not* or say is not when we think *is* we lie

Of course the man who speaks truthfully may in fact say what is false just as the man whose intent is to falsify may inadvertently speak the truth The intention to speak one s mind does not guarantee that one s mind is free from error or in possession of the truth Herein lies the traditional d stinction between truth as a social and as an intellectual matter What Dr Johnson calls *moral* truth consists in the obligation to say what we mean In contrast what he calls *physical* truth depends not on the veracity of what we say but on the validity of what we mean

The theory of truth in the tradition of the great books deals largely with the latter kind of truth The great issues concern whether we can know the truth and how we can ever tell whether something is true or false Though the philosophers and scientists from Plato to Freud seem to stand together against the extreme sophistry or skepticism which denies the distinction between true and false or puts truth utterly beyond the reach of man they do not all agree on the extent to which truth is attainable by men on its immutability or variab lity on the s gns by which men tell whether they have the truth or not or on the causes of error and the means for avoiding falsity

Much that Plato thinks is true Freud rejects as false Freud searches for truth in other quarters and by other methods But the ancient controversy in which Socrates engages with the sophists of his day who were willing to regard as true whatever anyone wished to think seems to differ not at all from Freud s quarrel with those whom he calls intellectual nihilists They are the persons who say there is no such thing as truth or that it is only the product of our own needs and desires They make it absolutely immaterial Freud writes what views we accept All of them are equally true and false And no one has a right to accuse any one else of error

Across the centuries the arguments against the skeptic seem to be the same If the skeptic does not mind contradicting himself when he tries to defend the truth of the proposit on that all propositions are equally true or false he can perhaps be challenged by the fact that he does not act according to his view If all opinions are equally true or false then why Aristotle asks does not the denier of truth walk into a well or over a precipice instead of avoiding such things If it were really a matter of indifference what we believed Freud similarly argues then we might just as well build our bridges of cardboard as of stone or inject a tenth of a gramme of morphia into a patient instead of a hundredth or take tear gas as a narcotic instead of ether But he adds the intellectual anarchists themselves would strongly repud ate such practical appl cations of their theory

Whether the skeptic can be refuted or merely silenced may depend on a further step in the argument in which the skeptic substitutes probabil ty for truth both as a basis for action and as the quality of all our op n ons about the real world The argument takes differ nt forms accord ng to the different ways in which probability is d tingu hed from truth or according

to the distinction between a complete and limited skepticism Montaigne for example seems to think that the complete skeptic cannot even acknowledge degrees of probability to be objectively ascertainable without admitting the criterion of truth whereas Hume defending a mitigated skepticism offers criteria for measuring the probability of judgments about matters of fact

THE POSITION OF THE skeptic in its bearing on truth and probability is discussed in the chapters on KNOWLEDGE and OPINION Here we shall proceed to other controversial questions concerning truth But we must first observe that there is one major question which does not seem to cause much dispute Not only do the great authors (with the possible exception of Montaigne and Hume) seem to be unanimous in their conviction that men can attain and share the truth—at least some truths—but they also appear to give the same answer to the question What is truth?

The apparently unanimous agreement on the nature of truth may seem remarkable in the context of the manifold disagreements in the great books concerning what is true As already indicated some of these disagreements occur in the theory of truth itself—in divergent analyses of the sources of error or in conflicting formulations of the signs of truth But even these differences do not affect the agreement on the nature of truth Just as everyone knows what a liar is but not as readily whether someone is telling a lie so the great philosophers seem able to agree on what truth is but not as readily on what is true That the definitions—of lying and of truth—are intimately connected will be seen from Plato s conception of the nature of truth as a correspondence between thought and reality If truthfulness viewed socially requires a man s words to be a faithful representation of his mind truth in the mind itself (or in the statements which express thought) depends on their conformity to reality

A false proposition according to Plato is one which asserts the non existence of things which are and the existence of things which are not Since false opinion is that form of opinion which thinks the opposite of the truth it necessarily follows as Aristotle points out that to say of what is that it is and of what is not that it is not is true just as it is false to say of what is that it is not or of what is not that it is

In one sense the relation between a true statement and the fact it states is reciprocal If a man is Aristotle declares then the proposition in which we allege that he is, is true and conversely if the proposition wherein we allege that he is is true then he is But the true proposition is in no way the cause of the being of the man whereas the fact of the man s being does seem somehow to be the cause of the truth of the proposition for the truth or falsity of the proposition depends on the fact of the man s being or not being

THIS SIMPLE STATEMENT about the nature of truth is repeated again and again in the subsequent tradition of western thought What variation there is from writer to writer seems to be in phrasing alone though the common insight concerning truth as an agreement or correspondence between the mind and reality may occur in the context of widely varying conceptions concerning the nature of the mind and of reality or being

Plotinus may be an exception insofar as his theory of knowledge involves a relation of identity rather than of mere correspondence The object known he writes must be identical with the knowing act If this identity does not exist neither does truth Truth cannot apply to something conflicting with itself what it affirms it must also be

But others like Augustine Aquinas Descartes and Spinoza adopt the conception of truth as an agreement between the mind and reality Falsehood occurs says Augustine when something is thought to be which is not According to Aquinas any intellect which understands a thing to be otherwise than it is is false Truth in the human intellect consists in the conformity of the intellect with the thing The same point is implied at least in Descartes remark that if we do not relate our ideas to anything beyond themselves they cannot properly speaking be false Error or for that matter truth can only arise in my judging that the ideas which are in me are similar or conformable to the things which are out

side me Spinoza states it as an axiom rather than a definition that a true idea must agree with that of which it is the idea

Making a distinction between verbal and real truth Locke writes Though our words signify nothing but our ideas yet being designed by them to signify things the truth they contain when put into propositions will be only verbal when they stand for ideas in the mind that have not an agreement with the reality of things Precisely because he considers truth to consist in the accordance of a cognition with its object Kant holds that so far as the content (as opposed to the form) of a cognition is concerned it is impossible to discover a universal criterion of truth

We shall return to Kant s point in a subsequent discussion of the signs of truth as also we shall have occasion to return to Locke s distinction between real and verbal truth Neither affects the insight that truth consists in the agreement of our propositions or judgments with the facts they attempt to state unless it is the qualification that truth so defined is real not verbal

In his Preface to *The Meaning of Truth* James comments on the excitement caused by his earlier lectures on pragmatism in which offering the pragmatist s conception of truth he had spoken of an idea s working successfully as the sign of its truth He warns his critics that this is not a new definition of the nature of truth but only a new interpretation of what it means to say that the truth of our ideas consists in their agreement as falsity means their disagreement with reality Pragmatists and intellectualists he adds both accept this definition as a matter of course

To agree in the widest sense with reality James then explains can only mean to be guided either straight up to it or into its surroundings or to be put into such working touch with it as to handle either it or something connected with it better than if we disagreed Better either intellectually or practically Any idea that helps us to deal whether practically or intellectually with either the reality or its belongings that *fits* in fact and adapts our life to the reality s whole setting will agree sufficiently to meet the requirement It will be true of that reality

Without enlarging on its meaning as James does Freud affirms that the ordinary man s conception of truth is that of the scientist also Science he says aims to arrive at correspondence with reality that is to say with what exists outside of us and independently of us This correspondence with the real external world we call truth It is the aim of scientific work even when the practical value of that work does not interest us

THE DEFINITION OF TRUTH as the agreement of the mind with reality leaves many problems to be solved and further explanations to be given by those who accept it As James indicates the theory of truth begins rather than ends with its definition How do we know when our ideas—our statements or judgments—correspond with reality? By what signs or criteria shall we discover their truth or falsity? To this question the great books give various answers which we shall presently consider There are other problems about the nature of truth which deserve attention first

For example one consequence of the definition seems to be that truth is a property of ideas rather than of things Aristotle says that it is not as if the good were true and the bad were in itself false hence falsity and truth are not in things but in thought Yet he also applies the word false to non existent things or to things whose appearance somehow belies their nature Aquinas goes further He distinguishes between the sense in which truth and falsity are primarily in the intellect and secondarily in things

The equation between intellect and thing he points out can be looked at in two ways depending on whether the intellect is the cause of the thing s nature or the nature of the thing is the cause of knowledge in the intellect When things are the measure and rule of the intellect truth consists in the equation of the intellect to the thing But when the intellect is the rule or measure of things truth consists in the equation of things to the intellect —as the product of human art may be said to be true when it accords with the artist s plan or intention Thus a house is said to be true that fulfills the likeness of the form in the architect s mind

But according to Aquinas not only artificial things but natural things as well can have truth when they are viewed in relation to the intellect on which they depend The divine intellect which is the creative cause of natural things measures their truth as the human intellect measures the truth of artificial things Natural things are said to be true Aquinas writes in so far as they express the likeness of the ideas that are in the divine mind for a stone is called true which possesses the nature proper to a stone according to the preconception in the divine intellect

Aquinas conclusion—that truth resides primarily in the intellect and secondarily in things according as they are related to the intellect as their source —at once suggests the profound difference between truth in the divine and in the human intellect The difference is more than that between infinite and finite truth The distinction between uncreated and created truth affects the definition of truth itself

The definition of truth as an equation of *thought to thing or thing to thought does not* seem to hold for the divine intellect The notion of conformity with its source Aquinas acknowledges cannot be said properly speaking of divine truth Divine truth has no *source It is not truth by correspondence* with anything else Rather it is in the language of the theologian the primal truth God Himself Who is the primal truth is the rule of all truth and the principle and source of all truth

In the human sphere the definition of truth seems to be differently interpreted according as truth is made a property of words or of ideas

To form a clear notion of truth Locke writes it is very necessary to consider truth of thought and truth of words distinctly from one another The truth of signs or what is sometimes called truth of signification is nothing *but the joining or separating of* words in propositions as the ideas they stand for agree or disagree in men s minds In contrast to such verbal truth what Locke calls mental truth consists in the joining or separating of our ideas themselves in a manner to accord with the realities they represent

For Locke verbal truth is chimerical or barely nominal because it can exist without any regard to whether our ideas are such as really have or are capable of having an existence in nature The signs we use may truly represent our thought even though what we think or state in words is false in fact Hobbes takes a somewhat contrary view *True* and *false* he writes are attributes of speech not of things And where speech is not there is neither truth nor falsehood

What is the cause of truth in speech? Hobbes replies that since it consists in the right ordering of names in our affirmations a man needs only to remember what every name he uses stands for If men begin with definitions or the settling of significations and then abide by their definitions in subsequent discourse their discourse will have truth From want of definitions or from wrong definitions arise all false and senseless tenets

Agreement with reality would seem to be the measure of truth for Hobbes only to the extent that definitions can be right or wrong by ref*erence to the objects defined* If definitions themselves are merely nominal and have rightness so far as they may be free from contradiction then truth tends to become more than a property of speech almost purely logistical—a matter of playing the game of words according to the rules Reasoning is reckoning with words It begins with definitions and if it proceeds rightly it produces general eternal and immutable truth For he that reasoneth aright in words he understandeth can never conclude in error

Hobbes position seems to have a bearing not only on the issue concerning verbal and real truth but also on the question whether the logical validity of reasoning makes the conclusion it reaches true as a matter of fact Some writers like Kant distinguish between the truth which a proposition has when it conforms to the rules of thought and the truth it has when it represents nature Valid reasoning alone cannot guarantee that a conclusion is true in fact That depends on the truth of the premises—upon their being true of the nature of things Aristotle criticizes those who accepting certain principles as true are ready to accept any consequence of their application

As though some principles he continues did not require to be judged from their results and particularly from their final issue And that issue in the knowledge of nature is the unimpeachable evidence of the senses as to each fact

BUT NOT ALL TRUTH may require or admit of such certification The truths of mathematics may be different from those of physics or meta physics and those of philosophy or religion from those of the empirical natural sciences It is sometimes supposed for example that the truths of mathematics are purely formal or without reference to real existence That seems to be the position of Hobbes and Hume both of whom take geometry as the model of truth For them statements of fact about real existence are at best probable op n ons For others like James there can be truth in the natural sciences but such empirical truth is distinct in type from what he calls the necessary or *a priori* truths of mathematics and logic

Does the definition of truth as agreement with reality apply to all kinds of truth, or only to truths about the realm of nature? The ques tion has in mind more than the distinction be tween mathematics and physics It is concerned with the difference between the study of na ture and the moral sciences or between the theoretic and the practical discipl nes As re gards nature writes Kant experience pre sents us with rules and is the source of truth but not so in ethical matters or morality A theoretic proposition asserts that something ex ists or has a certain property and so its truth depends on the existence of the thing or its real possession of an attr bute but a practical or moral judgment states not what is but what should occur or ought to be Such a judgment cannot be true by correspondence with the way things are Its truth according to Aristotle must consist rather in agreement with r ght desire

On this theory all that remains common to speculative and practical truth is the conform ity of the intellect to something outside itself—to an existing thing or to desire will or appe tite Stress ng the difference Aquinas declares that truth s not the same for the practical as for the speculative intellect The conformity with right appetite upon which practical truth depends he goes on to say has no place in necessary matters which are not effected by the human will but only in contingent matters which can be effected by us whether they be matters of interior action or the products of external work In consequence in matters of action truth or practical rectitude is not the same for all as to what is particular but only as to the common principles whereas in specu lative matters concerned chiefly with neces sary things truth is the same for all men both as to principles and as to conclusions

THE PROBLEM OF THE criteria or signs of truth does not seem to be of equal concern to all who discuss the nature of truth For the ancients at one extreme it seems to be hardly a problem at all For William James at the other extreme it seems to be the central problem In the contro versy over the pragmatic theory of truth in which James engages with Bradley and Russell some confusion tends to result from the fact that James seldom discusses what truth is except in terms of how we know what is true while his opponents often ignore the signs of truth in d scussing its nature The important point for James is not that truth consists in agreement with reality but that true ideas are those we can ass milate validate corroborate and veri fy Whether we can assimilate or validate or verify an idea in turn depends upon its conse quences either for thought or action or what James calls truth s cash value in experiential terms

In his *Psychology* James suggests another aspect of his theory of the expediency of a true idea which he later developed in *Pragmatism* Not only must our conceptions or theories be able to account satisfactor ly for our sensible experience but they ar also to be weighed for th ir appeal to our aesthetic emotional and active needs Apart from this added criterion wh ch became the subject of much d spute the pragmatic theory of truth represents one of the tradit onal solutions of the problem of how to tell whether something is true or false It looks ma nly to extrins c signs—not to som feature of the idea or thought itself but to its conse quences

'The test of real and vigorous thinking

writes J S Mill the thinking which ascertains truths instead of dreaming is successful application to practice In similar vein Bacon says that of all the signs there is none more certain or worthy than that of the fruits produced for the fruits and effects are the sureties and vouchers as it were for the truth of philosophy The man who supposes that the end of learning lies in contemplation of the truth will propose to himself as the test of truth the satisfaction of his mind and understanding as to the causes of things long since known Only those who recognize that the real and legitimate goal of the sciences is the endowment of *human life with new inventions and riches* will submit truth to the test of its leading to some new earnest of effects To take effects as pledges of truth is for Bacon equivalent to declaring that truth and utility are perfectly identical

Verification by appeal to observation or sensible evidences may be regarded as one way of testing the truth of thought in terms of its consequences but it also involves the *principle of* contradiction as a criterion of truth When Aristotle recommends for example that we should accept theories as true only if what they affirm agrees with the observed facts he is saying that when the truth of a particular perception is indisputable because the observed fact is evident the general or theoretical statement which it contradicts must be false

But the principle of contradiction as a criterion of truth goes further than testing theories by their consistency with observation One of two contradictory statements must be false and the other must be true if that which it is true to affirm is nothing other than that which it is false to deny Even a single statement may show itself false by being self contradictory and in consequence its opposite can be seen to be true What Aristotle calls axioms or self evident and indisputable truths are those propositions immediately known to be true and necessarily true because their contradictories being self contradicatory are impossible statements or necessarily false The truth of any proposition which is neither a self evident axiom nor the statement of an evident perceived fact is tested according to the principle of contradiction by its consistency with axioms or perceptions

As opposed to consequences or effects contradiction or consistency as a sign of truth seems to be an intrinsic criterion But this criterion is not universally accepted Contradiction writes Pascal is not a sign of falsity *nor the want of contradiction a sign of truth.* Nor even when accepted is it always judged adequate to solve the problem It is for Kant a merely logical criterion of truth the *conditio sine qua non* or negative condition of all truth Farther than this logic cannot go and the error which depends not on the form but on the content of the cognition it has no test to discover

Some thinkers seem to rely upon an intrinsic mark by which each idea reveals its own truth or falsity Augustine for example considers by what criterion he would know whether what Moses said was true And if I did know it he asks would it be from him that I knew it? No he replies but within me in the inner retreat of my mind the Truth which is neither Hebrew nor Greek nor Latin nor Barbarian would tell me *without lips or tongue or sounded* syllables He speaks truth

For Augustine God is the warranty of the inner voice which plainly signifies the truth. For Spinoza the truth of an idea depends upon its relation to God Because a true idea in us is that which in God is adequate in so far as He is manifested by the nature of the human mind it follows according to Spinoza that he who has a true idea knows at the same time that he has a true idea nor can he doubt the truth of the thing for he who knows a thing truly must at the same time have an adequate idea or a true knowledge of his knowledge tha is to say (as is self evident) he must be certain

It is impossible Spinoza maintains to have a true idea without at the same time knowing that it is true To the question How can a man know that he has an idea which agrees with that of which it is the idea? *he replies that* he knows it simply because he has an idea which agrees with that of which it is the idea that is to say because truth is its own standard For what can be clearer Spinoza asks or more certain than a true idea as the standard of truth? Just as light reveals both itself and the darkness, so truth is the standard of itself and of the false

Spinoza defines an adequate idea as one which in so far as it is considered in itself without reference to the object has all the properties or internal signs of a true idea He explains moreover that by internal he means to exclude even the agreement of the idea with its object This he thinks meets the objection that if a true idea is distinguished from a false idea only in so far as it is said to a ree with that of which it is the idea the true idea [would have] no reality or perfection above the false idea (since they are distinguished by an external sign alone) and consequently the man who has true ideas will have no greater reality or perfection than he who has false ideas only

Although Descartes and Locke also employ an intrinsic criterion of truth—not the adequacy but the clarity and distinctness of ideas—they do not seem to mean as Spinoza does that a single idea in and of itself can be true or false Like Aristotle before them or Kant later they regard a simple idea or concept as str ctly speaking incapable of being either true or false

Truth and falsity writes Locke belong only to propositions —to affirmations or denials which involve at least two ideas or as Kant says truth and error are only to be found in a judgement which explains why the senses do not err not because they always judge correctly but because *they do not judge at all*

Nevertheless for Locke the clarity and distinctness of the ideas which enter into the formation of proposit ons enable the mind to judge intuitively and certainly of their truth When ideas are clear and distinct the mind perceives the ag e ment or disagreement of two ideas immed ately by themselves Such kind of truths the mind perceives at the first sight of the deas together by bare intuition and this kind of kno vledge is the clearest and most certain that human frailty is capable of

THE PROBLEM OF the criterion of truth is sometimes closely connected with the problem of the causes of error Descartes seems to pass by natural steps from one to the other Having decided that the things which we conceive very clearly and distinctly are all true he reminds himself that there may be some difficulty in ascertaining which are those that we distinctly conceive The mystery of error looms large for Descartes because it seems to him that the human intellect being created by God must have a kind of natural infallibility the infallibility of an instrument designed by God for knowing the truth not for ignorance or error

If we did not know Descartes reflects that all that is in us of reality and truth proceeds from a perfect and infinite being however clear and distinct were our ideas we should not have any reason to assure ourselves that they had the perfection of being true But once we have recognized that there is a God and also recognized that all things depend upon Him and that He is not a deceiver we can infer that whatever we perceive clearly and distinctly cannot fail to be true

What then is the source of our errors? I answer writes Descartes that they depend on a combination of two causes to wit on the faculty of knowledge that rests in me and on th power of choice or free will Each perfect in its own sphere neither the will nor the understanding by itself causes us to fall into error Since I understand nothing but by the power which God has given me for understanding there is no doubt Descartes declares that all that I und rstand I understand as I ought and it is not possible that I err in this

The trouble lies in the relation of the will to the intellect Since the will is much wider in its range and compass than the understanding I do not restrain it within the same bounds but extend it also to things which I do not understand It is not God s fault says Descartes if in the exercise of my freedom I do not withold my assent from certain things as to which He has not placed a clear and distinct knowledge in my understanding But as long as I so restrain my will within the limits of knowledge that it forms no judgment except on matters which are clearly and distinctly represented to it by the understanding I can never be deceived

There are other accounts of er or less elaborate than Descartes which a e s milar to the extent that they place the cau e n so ne combination of human faculties rath r th n in their simple and separat oper tion Socrates explains to Theaetetus that false opinions arise when the

senses and the mind do not cooperate properly Aristotle suggests that it is the imagination which frequently misleads the mind Looking at the problem from the point of view of the theologian Aquinas holds that Adam in his state of innocence before the fall could not be deceived While the soul remained subject to God he writes the lower powers in man were subject to the higher and were no impediment to their action But man born in sin can be deceived not because the intellect itself ever fails but as a result of the wayward influence of some lower power such as the imagination or the like

Lucretius for whom sense not mind is infallible attributes error to the fault of reason which misinterprets the veridical impressions of the senses What surer test can we have than the senses he asks whereby to note truth and falsehood? He explains that the mind not the senses is responsible for illusions and hallucinations Do not then fasten upon the eyes this frailty of the mind

Other writers like Descartes take the opposite view that the senses are much less trustworthy than the intellect Still others like Montaigne seem to find that error and fallacy rather than any sort of infallibility are quite natural to all human faculties and beset sense and reason alike Man says Pascal is full of error natural and ineffaceable without grace Nothing shows him the truth Everything deceives him Those two sources of truth reason and the senses besides being both wanting in sincerity deceive each other in turn

Considering the extremes to which men have gone in their appraisal of human prowess or frailty Locke s moderate statement of the matter is worth pondering Notwithstanding the great noise made in the world about errors and opinions he writes I must do mankind that right as to say there are not so many men in errors and wrong opinions as is commonly supposed Not that I think they embrace the truth but indeed because concerning these doctrines they keep such a stir about they have no thought no opinion at all And though one cannot say that there are fewer improbable or erroneous opinions in the world than there are yet this is certain there are fewer that actually assent to them and mistake them for truths than is imagined

OUTLINE OF TOPICS

REFERENCES

To find the passages cited u e the numbers in heavy type vh ch are the volume and page numbers of the pas ges referred to For example in **4** Homer *Iliad* BK II [265 283] **12d**, the number **4** is the number of the volume in the set the number **12d** ind cates that the pas sage is in section d of page 12

Page Sections When the text is printed in one column the letters **a** and **b** refer to the upper and lower halves of the page For example in **53** James *Psychology* **116a 119b** th passage begins in the upper half of pa e 16 and ends in the lov er half of page 119 When the text is printed in two columns the letters **a** and **b** refer to the upper and lo er halves of the left hand side of the page the letters **c** and **d** to the upper and lower halves of the ri ht hand s de of the page For example in **7** Plato *Symposium* **163b-164c** the passage begins in the lo er half of the left hand side of page 163 and ends in the upper half of the right hand s de of pa e 164

Author s Divisions One or more of the main divisions of a work (such as PART BK CI s CT) are sometim s included in the ref ence line numbers in brackets are gi en in cer ta n cases *e g* *Iliad* BK II [265 283] **12d**

Bible References The references are to book chapter and verse When the King James and Douay versions differ in title of books or in the numbering of chapters or verses the King James vers on is cited first and the Douay indicated by a *(D)* follows *e g* Old Testa m nt *Nehemiah* 7 45—*(D) II Esdras* 7 46

Symbols The abbreviation esp calls the reader s attention to one or more especially relevant parts of a whole reference pass m signifies that the topic is discussed intermit tently rather than continuou ly in the work or passage cited

For add tional information concerning the style of the references see the Explanation of Reference Style for general g idance in the use of *The Great Ideas* consult the Preface

1 The nature of truth

7 Plato *Euthydemus* **71c 72a** / *C atylus* **85a 89b**

8 Aristotle *Categor es* CH 5 [4 2 ^{b}13] **8c 9a** / *Interpretat on* CH I [16 9 18] **25a b** CH 4 [17 1-4] **26b** / *Metaphys c* K IV CH 7 [1011^{b} 5 29] **531c** [1012 1 7] **531d 532a** BK VI CH 4 [1 27^{b}17 22] **550a** BK IX CH 10 [1051 34 ^{b}5] **577c d**

17 Plotinus *Fifth Ennead* TR III CH 5 **218b**

18 Augustine *C nf ssi ns* BK VII par 21 **49d 50a**

19 Aquin s *Summa Tl ologica* PART I Q 13 A 12 NS and REP 3 **74 75b** Q 16 **94b 100d** esp A I NS **94b-95c** A 2 ANS **95c 96b** Q 17 A 4 **103c 104b**

23 Ho bes *Le than* P RT I **56b**

31 D c rtes *Med tations* I I **83** IV **89a 93a** p ssim / *Obj ct ons and R pl es* **229c d**

31 S inoza *Ethics* PART I AXIOM 6 **355d** PART II DEF 4 **373b** P O 3 **385c** PROP 43 SCHOL **388d 389b**

35 Lo ke *H man Understand ng* BK II CH X X I SECT I 3 **243c 244a** S CT 19 **247a b** BK IV CH V **329a 331b** esp T 2 **329a** EC) **330d 331a**

42 K nt *Pu e Reason* **36a 37b 77b d 94a 193a b**

46 Hegel *Philosophy of R ght* INTRO par 23 **17d** PART III par 280 **94d 95a**

54 Freud *New Introductory Lectu es* **879c**

1*a* The signs or criteria of truth methods of verification

7 Plato *Euthydemus* **71c 74a** / *Gorgias* **266b** / *Republ c* BK IX **421a 422b** / *Timaeus* **447a d** / *Sophi t* **556c 559a**

8 Aristotle *Pr or Analyt cs* BK I C I 32 [47 4 9] **65a** / *H ens* BK I CH 3 [270^{b}1 13] **361c d** BK III C I 7 [3 6 1 18] **397b c** / *Soul* BK I CH I [4 2^{b}15 4 3 2] **631d 632a**

9 Aristotle *Pa ts of Animals* BK III CH 4 [666 7-10] **193d** / *Mot on of Animals* CH I [698 10-5] **233a** / *Generation f Animals* BK III CH 10 [76 ^{b}27 35] **301d 302** / *Eth cs* BK I CH 7 [1 98 35]-CH 8 [1098^{b}12] **343d 344a** BK II CH 7 [1 07 27 32] **352d 353** BK X CH I [11/2 34 ^{b}7] **426b** CH 8 [1179 17 22] **433d 434a** / *Pol tics* BK VII CH I [1323 33 ^{b}7] **527b**

10 Hi oc ates *Ancient Med cine* par 1 **1b**

10 G en *Natural Facult es* BK I CH 13 **173d**

12 Lucretiu *Nature of Things* BK I [6 0-700] **9** BK IV [469 499] **50b d**

18 Au ustine *Co f ss ons* BK X par 17 **o 75c 76** BK XI par 5 **90b-c** / *City of G d* BK XI CH 2 **323a c**

19 AQUIN S *Summa Theologica* PART I Q 32 A I REP 2 175d 178a
23 H BES *Leviathan* PART I 56b PART III 165a CONCLUSION 282c
25 MONTAI NE *Essays* 260c 261 285c 288a 292c d
28 GALILEO *Two New Scienc s* THIRD D Y 200a b
28 HARVEY *Mot on of the He rt* 268d 286b c 295d 296a / *C rculat on of th Blood* 322d 323d 324c d / *On A imal Generat on* 331b-332a 357b
30 BACON *Advancement of Learn ng* 16a 43d 44c 57d 58b / *Novum O ganum* BK I AP 14 17 107d 108a A H 50 111b APH 7 116b-117 A H 73 117d 118a APH 81 120b-c APH 106 128c K II 13 a 195d passim
31 DESC RT *P l s* II 2a 3b / *Disco rse* PART I 43d 44b PART II 47a 48a PART IV 51b 54b P RT VI 61d 62 65d 66b / *Meditations* I 72b d 73d 74a I II 75 81d III 82a d 85b-86d IV 89 93a pass m V 93a 94a 95d 96a V 99 / *Obje t n and Replie* 123d 125b POSTULAT VII 131c 153a c 157b 158 168b c 206c 207a 210b c 226d 237b 238b
31 SPINOZ *Ethics* PART I AX O 6 355d PART II D F 4 373b PROP 32-34 385c d PRO 38 43 386 389b P RT IV PROP I 424 425a PART V PRO 4 S HO 453b d
33 PASCAL *Vacuum* 365b 366a / *Geometrical Demo st ati* 435b 436b
34 N W ON *P cipl* K III RULE IV 271b
35 LOCKE *Huma Under tand g* INTRO ECT 2 3 93b 94a K II CH XXX SECT 2 238b c K I CH XI ECT 24 305b d BK IV CH IV SECT I 323d 326d esp S CT 3 4 324b c CH X I SECT 3 362c d
35 B RKELEY *Human Knowledge* S CT 129 438d 439a
35 HUME *Human Under tand g* SECT X DIV 82 487b c S CT X DIV 86-91 488d-491c
37 FI LD NG *Tom Jo es* 13b
38 R S E U *In qual ty* 348a c
42 KANT *P Rea n* 36b 37b 64d 65 77b d 85b 87c esp 86b 87c 91d 93b 114d 115a 146 149d esp 146d 153a c 157d 193a b 211c 218d 231b
43 FE I T NUM ER 78 b
43 MIL *Ut l a nism* 446d-447a 461 d 463c d
44 BO W LL *Joln* 129
45 L VO SI R *Elements f Ch m try* PR 1b-c
45 FARADAY *Re a ches Elect ity* 467 b 774d 775a
46 H GE *Phl sophy of R ht* PR 2b PART par 7 74b d / *Phil sophy f His ry* P RT V 350a b
51 TO ST Y *W nd Pe ce* PI O U II 684a
53 J MES *Psy h l gy* 141 142a 176 b 456 636 660b esp 636 b 638b 640 643 645a b 646b 648b 654 655a 863a 864 865a 881 b
54 FREUD *New Int oductory Lectu es* 819d 820a 879c

1b The rel t on between truth and being or reality

7 PLATO *Euthydemus* 71c 74 / *C atyl s* 85a 89b / *Phaedrus* 124c 126c / *Republic* BK V 368c 373c BK VI 383d 388a esp 387a BK IX 423b-424a / *Timaeus* 447 d / *Parmenid s* 507c 509a / *Theaetetus* 534d 536a 537a c / *S phi t* 561d 577b / *Ph lebus* 625a
8 ARISTOTL *C tegories* CH 12 [14^b10-2] 20b / *Interpretation* H 3 [16^b19 26] 25d 26a CH 9 [8^b1-4] 28b c / *P ior Analytics* BK I CH 36 [48 40-^{b}9] 66d BK II CH 2 [53^b11 26] 72d 73 / *Metaphys s* BK II H I [993^b19-31] 512a b BK V CH 7 [017 31 34] 538a K VI CH 4 550a c BK IX CH 10 577c 578a c
17 PLOTINUS *F fth Enn ad* TR III H 5 218b
18 AUGU T NE *Confessi ns* BY II par 10 15b d K V par 5 28b-c BK VII par 6-23 48c 50c / *C ty of G d* BK XI CH 10 328c d / *Christi D ct ine* BK I CH 34 634b c
19 AQUINAS *Summa Theolog ca* PART I Q I A I REP 2 3b-4a Q 3 A 4 R P 2 16d 17c Q 14 A 8 REP 3 82 83b Q 16 A I REP 3 94b 95 A 3 96b d A 8 REP 2 99d 100d Q 18 A 4 R 3 107d 108c Q 44 A I ANS 238b 39 Q 87 A 3 REP I 467b-468a Q 19 A ANS 604c 607b PART I II Q 2 A 3 ANS 617b 618 Q 3 A 7 ANS 628a d Q 22 A ANS 721c 722c Q 9 A 5 ANS 747c 748b
21 D NT *Di in C m dy* PARAD SE IV [124-6] 112a XXXIII [49-54] 156d
23 HO ES *Le than* ART I 56b
31 D CART S *Meditat* I 76c / *Obj tions a d Repl es* 226d 227a 229 d 261a
31 S INOZA *Ethics* ART I AXIOM 6 355d PART II D F 4 373b PROP 7 375a c P OP 10 SCHOL 376d 377a PROP 24 34 383c 385d PROP 43 SCHO 388d 389b PRO 44 DEMON T 389b-c COROL 2 D ONST 390a
35 LOCKE *H man Under ta ding* K IV CH V ECT 7 8 330b d
42 KANT *Pure Reason* 36a 37b esp 36b c 91d 93b 102c 103a 114d 115a
46 H G L *Philos phy of Right* PART II pa 360 113d 114 / *P l ophy of History* IN O 156d 157b PART I 237d 238 RT IV 349b 350b
51 TO STOY *War nd Pea* BK V 217
53 JAM *P y h l gy* 636a 638a 643a esp 641a 643a 852 880b 882a

1c Th rel tion of truth goodn ss nd be ty

7 PLA O *Pl dr s* 124c 129d / *Symp um* 167 d / *Republic* K VI 383d 388a / *Theae t t s* 525c 526 / *Sophist* 556 559 561b d / *Ph l bus* 630d 631d 637 638 / *La* K II 654 662a
8 A OT *M aphys s* BK V C I [I 13 0-4] 533b K X CH 7 [72 5-^{b}4] 602b-c /

(1 *The nature of truth* 1c *The relation of truth goodness and beauty*)

Soul BK III CH 7 663c 664b esp [431 13 19] 663d
12 EPICTETUS *Discourses* BK II CH 2 141a BK IV CH 11 241a b
12 AURELIUS *Meditations* BK IV SECT 20 265a b
17 PLOTINUS *First Ennead* TR III CH 1 2 10a d TR VI CH 3 9 22b 26a esp CH 4 23a / *Sixth Ennead* TR VII CH 31-33 336d 338b
18 AUGUSTINE *Confessions* BK VII par 23 50b c
19 AQUINAS *Summa Theologica* PART I Q 5 A 4 REP 1 25d 26c Q 16 A 1 ANS 94b 95c A 3 ANS 96b d A 4 97a-c Q 17 A 4 REP 2 103c 104b Q 54 A 2 ANS 285d 286c Q 79 A 11 REP 2 424d-425b Q 82 A 3 REP 1 433c-434c A 4 REP 1 434c-435c PART I II Q 3 A 5 REP 2 626b 627a Q 9 A 1 ANS and REP 2 3 657d 658d Q 19 A 1 703b d A 3 REP 1 704c 705a Q 22 A 2 ANS 721c 722c Q 27 A 1 REP 3 737b d A 2 ANS 737d 738c Q 29 A 5 747c 748b
20 AQUINAS *Summa Theologica* PART II II Q 180 A 2 REP 3 608c 609c
30 BACON *Advancement of Learning* 26c 27a
35 LOCKE *Human Understanding* BK IV CH III SECT 20 319b c
46 HEGEL *Philosophy of Right* PART II par 132 46b / *Philosophy of History* PART II 278a c PART IV 346d 347a
52 DOSTOEVSKY *Brothers Karamazov* BK VI 153b d
54 FREUD *New Introductory Lectures* 880b

2 The modes of truth and falsity

2a The distinction between truth and falsity in the mind and in things logical and ontological truth

8 ARISTOTLE *Metaphysics* BK V CH 29 [1024b 18 26] 546c d
19 AQUINAS *Summa Theologica* PART I Q 16 A 1 94b 95c A 7 REP 4 99a d Q 17 A 1 100d 101d Q 21 A 2 ANS 125 d
31 DESCARTES *Objections and Replies* 126b 127c
35 LOCKE *Human Understanding* BK II CH XXXII SECT 2 243d BK IV CH V SECT 11 331b

2b The distinction between truth of statement and truth of signification the distinction between real and verbal truth

8 ARISTOTLE *Metaphysics* BK IV CH 4 [1006 12-29] 525b BK XI CH 5 [1062 5 19] 590b c
19 AQUINAS *Summa Theologica* PART I Q 16 8 REP 3 99d 100d
23 HOBBES *Leviathan* PART I 56b
31 SPINOZA *Ethics* PART II PROP 47 SCHOL 390c 391a
35 LOCKE *Human Understanding* BK II CH XXXII SECT 4 25 244 248 passim esp SECT 5 244a b BK IV CH IV SECT 2 323d 326d passim esp SECT 1 323d 324a SECT 18 328d 329a CH V SECT 6-8 330b d
53 JAMES *Psychology* 880b 882a

2c The distinction between theoretical and practical truth conformity to existence and conformity to right desire

8 ARISTOTLE *Metaphysics* BK II CH 1 [993b 19-31] 512a b
9 ARISTOTLE *Ethics* BK I CH 3 339d 340b CH 7 [1098 25-35] 343d BK II CH 2 [1103b 6-1104 9] 349b c BK VI CH 2 387d 388b BK X CH 1 [1172 34 b8] 426b c
19 AQUINAS *Summa Theologica* PART I Q 85 A 6 REP 1 458d-459c
20 AQUINAS *Summa Theologica* PART I-II Q 5 A 5 REP 3 39a-40a Q 94 A 4 ANS 223d 224d
23 HOBBES *Leviathan* PART I 78b c
31 DESCARTES *Objections and Replies* 126a b 206c 207a 237b-c
35 LOCKE *Human Understanding* BK IV CH III SECT 11 331b
42 KANT *Pure Reason* 114d 115a 190c 191a / *Fund Prin Metaphysic of Morals* 253b-c 264b d 271a c 283d 287d esp 283d 284d / *Practical Reason* 291a 297c 310a b 319c 321b 329a 337a c esp 329b d / *Intro Metaphysic of Morals* 388a d / *Judgement* 596c 598b
43 MILL *Utilitarianism* 461c d
46 HEGEL *Philosophy of Right* PREF 2d 3b / *Philosophy of History* PART IV 360d 361a
53 JAMES *Psychology* 643a 645b 655a 659 865b 886a 888a

2d The comparison of human and divine truth finite truths and the infinite truth

OLD TESTAMENT *Exodus* 34 6 / *Numbers* 23 19 / *Psalms* 31 5 86 15 96 13 100 5 117 2 119 142 160 146 6—(D) *Psalms* 30 6 85 11 95 13 99 5 116 2 118 142 160 145 6-7 / *Proverbs* 30 5-6
NEW TESTAMENT *John* 3 33 7 14 18 8 1-59 14 6 16-17 15 26 16 13 14 17 17 18 37 38 / *Romans* 1 18 25 2-3 8-9 20 / *I Corinthians* 1 17 2 16 / *II Corinthians* 13 8 / *Ephesians* 4 21 24 / *II Thessalonians* 2 10-13 / *I Timothy* 2 3 4 3 15 / *II Timothy* 2 25 26 / *Hebrews* 6 18 10 26 / *James* 5 19-20 / *I John* 1 5 10 2 4 21 22 3 18 19 5 5 12 esp 5 6 / *II John* 2 4 / *III John* 3 4 8
18 AUGUSTINE *Confessions* BK III par 10 15b d BK V par 5 28b c BK XI par 5 90b c / *City of God* BK XI CH 10 328c d / *Christian Doctrine* BK I CH 9 10 627a b CH 34 634b c
19 AQUINAS *Summa Theologica* PART I Q 2 A 1 REP 3 10d 11d Q 16 A 5-8 97 100d Q 21 A 2 ANS 125c d Q 106 A 1 REP 3 545d 546d Q 107 A 2 3 550b 551c PART I II Q 3 A 7 ANS 628a d
20 AQUINAS *Summa Theologica* PART I II Q 93 A 2 ANS 216c 217b
21 DANTE *Divine Comedy* PARADISE II [19-148] 108a 109b passim IV [115] V [12] 111d 112b XIX [22-66] 135b d XXI [73 105] 139 b
25 MONTAIGNE *Essays* 80b 82b 208d 209c 213c d 267c 268a 272d 273b

31 SPINOZA *Ethics* PART II PROP 32 34 385c d
32 MILTON *Paradise Lost* BK VII [109-13] 219b-220a
46 HEGEL *Philosophy of History* PART III 308a b PART IV 349b-350a
51 TOLSTOY *War and Peace* BK V 216d 218b esp 217 d
53 JAMES *Psychology* 671b [fn 1]

2e The distinction between truth and probability: its relation to the distinction between knowledge and opinion

7 PLATO *Republic* BK V 370d 373c esp 373b c BK VI 386d 388a / *Timaeus* 447b d / *Theaetetus* 517b-d 527b-d 531b-532a / *Philebus* 633a 635b
8 ARISTOTLE *Interpretation* CH 9 28a 29d / *Posterior Analytics* BK I CH 2 97d 99a CH 6 102b 103c CH 8 104a b CH 33 119d CH 33 121b 122 c / *Topics* BK I CH 1 [100^a25-^b26] 143a b / *Metaphysics* BK IV CH 4-6 525a 531c BK VII CH 15 [1039^b31-1040^a8] 563d 564a BK IX CH 10 [1051^b13-18] 577d BK X CH 6 590d 592b
9 ARISTOTLE *Ethics* BK I CH 3 [1094^b11-28] 339d 340 CH 7 [1098^a25-35] 343d BK II CH 2 [1104^a1-9] 349b-c BK VI CH 9 [1142^b5-15] 391d / *Rhetoric* BK I CH 1 [1355^a4-18] 594b CH 2 [1357^a23-^b1] 596d 597 BK II CH 25 [1402^b13-1403^a17] 652b-653a
16 COPERNICUS *Revolutions of the Heavenly Spheres* 505 506a
19 AQUINAS *Summa Theologica* PART I Q 1 A 7 ANS 56a 57b Q 16 A 8 99d 100d Q 32 A 1 REP 2 175d 178a Q 79 A 9 REP 3 4 422b-423a
20 AQUINAS *Summa Theologica* PART I-II Q 57 A 2 REP 3 36 37b Q 94 A 4 ANS 223d 224d
23 HOBBES *Leviathan* PART I 60 61a
25 MONTAIGNE *Essays* 271b 273b
31 DESCARTES *Rules* II 2 3b III 3d-4a / *Discourse* PART I 43d 44 b PART IV 51b d / *Meditations* I 75a 78b V 95b 96a / *Objections and Replies* 124b-125b
31 SPINOZA *Ethics* PART I PROP 35 DEMONST 385d 386 PROP 40 SCHOL 388a b PROP 41 44 388 390a PROP 49 SCHOL 391d 392a
32 MILTON *Areopagitica* 406a b
33 PASCAL *Pensées* 184-241 205a 217b passim esp 233 241 213b 217b
35 LOCKE *Human Understanding* BK IV CH III SECT 14 316b-d SECT 9 322c 323a CH V SECT 6-8 325a c SECT 8 328d 329 CH V 331b-336d esp SECT 3 335 d SECT 6 336d CH XV 365a 366c CH XVI SECT 371d 372b SECT 14 17 378 379 CH XX SECT 384c d
42 KANT *Pure Reason* 1 4a c 108a 228c d 240b-243c / *Judgement* 600d 604b esp 601d, 603 b 603d 604b
43 MILL *Liberty* 274b 293b passim
45 FARADAY *Researches in Electricity* 391b
46 HEGEL *Philosophy of Right* PART II par 132 46b c par 140 49b 54a PART III par 268 84c d ADDITIONS 91 131a d
54 FREUD *Beyond the Pleasure Principle* 661c 662a

3 Truth and error in relation to human knowing and learning

3a Truth in the apprehensions of the sensitive faculty

3a(1) The truth of sensations: judgments of perception

7 PLATO *Phaedo* 224a b / *Republic* BK VI 386d 388a BK VII 392b 393b BK X 431b-c / *Theaetetus* 538d 541a / *Sophist* 575d 577b esp 577a b / *Philebus* 622d 626a
8 ARISTOTLE *Metaphysics* BK IV CH 5 [1010^b1-29] 530a c BK XI CH 6 [1062^b33-1063^a9] 591a b / *Soul* BK II CH 6 [418^a6-18] 648d 649a BK III CH 3 [427^b6-15] 659d 660a [428^a11-^b8] 660b CH 6 [430^b26-31] 663b c / *Sense and the Sensible* CH 4 [442^b4-9] 680a b
9 ARISTOTLE *Parts of Animals* BK II CH 2 [648^b5-20] 173a
12 LUCRETIUS *Nature of Things* BK I [693-700] 9 BK V [379-521] 49a 51a
18 AUGUSTINE *City of God* BK XIX CH 18 523a b
19 AQUINAS *Summa Theologica* PART I Q 17 A 2 102a d Q 85 A 6 ANS 458d 459
25 MONTAIGNE *Essays* 285 286a
28 HARVEY *Circulation of the Blood* 320b / *On Animal Generation* 333c
30 BACON *Advancement of Learning* 51 d 58b / *Novum Organum* BK I APH 6 108a APH 41 109c d APH 50 111b / *New Atlantis* 213d
31 DESCARTES *Rules* I 13a b XII 18c 22c 23a / *Discourse* PART V 53b / *Meditations* I 75a 77 III 83d 84 VI 101d 103d / *Objections and Replies* 124d POSTULATE 130d 206c 207 229d 230d
31 SPINOZA *Ethics* PART I PROP 24-28 383c 384c PROP 40 SCHOL 2 PROP 4 388a
33 PASCAL *Pensées* 9 173b
35 LOCKE *Human Understanding* BK I CH XXX SECT 2 238b c CH XXXI SECT 239b-d CH XXX SECT 4 6 245 246b BK V CH IV SECT 4 324c CH XI SECT 3 355a b SECT 1 357b
35 BERKELEY *Human Knowledge* INTRO SECT 1 405 b SECT 14 15 415-416 SECT 40 420b SECT 86-88 429c 430b
35 HUME *Human Understanding* SECT X DIV 117-123 504a 506a
42 KANT *Pure Reason* 108 109c esp 108a-d
43 MILL *Utilitarianism* 461 d
53 JAMES *Psychology* 460a-471a esp 468b-469 475 478b 508a 520a esp 508 519b 521 522 565 b 593a 626a 593a 595a 601a 602a 606b 625a 648b [fn] 780 785a 851b 852a
54 FREUD *Interpretation of Dreams* 148d 149a 337 c / *Unconscious* 430b c

(3a *Truth in the apprehensions of the sensitive faculty*)

3a(2) Truth in the memory and imagination

7 Plato *Theaetetus* 538d 541a / *Philebus* 623d 624c
8 Aristotle *Metaphysics* bk iv ch 5 [1010b1 12] 530a b bk v ch 29 [1024b17 27] 546c d / *Soul* bk iii c 3 [428 11 18] 660b / *Memory and Reminiscence* ch 1 [451 8 12] 692a
19 Aquinas *Summa Theolo ca* part i q 17 a 2 rep 2 102a d q 54 a 5 ans 288a d
29 Cervantes *Don Quixote* esp part i 1d 2b 4b c 18d 22a 44b 50b 52d
31 Descartes *Rules* xii 22c 23a / *Di course* part iv 53b / *Med tat o s* i 75c 77c
31 Spinoz *Ethics* part ii prop 17 schol 381b d pro 35 schol 386 b prop 40 schol 1 prop 41 387b 388c prop 44 corol 1 and schol 389c 390a
33 P sc l *Pensees* 82–88 186b 189b
35 Locke *Hum n Understa d ng* bk iv ch xi sect 11 357b c
35 Hu e *Human Understa di g* sect ii div 11 455b c
40 Gibbon *Decl ne a d Fall* 88c d
42 Kant *Pu e Reason* 173b 174a
51 Tolstoy *Wa and Peace* bk vii 294b 295a
53 James *Psychology* 240a 241b 480a 484 esp 483b 498a 499a 527a 538b 662a 663a [fn 1]
54 Freud *I terpretation of Dreams* 341b 343c esp 342d 343b / *General Introduction* 597b 599b / *Ego and Id* 700c 701d

3b Truth in the acts of the mind

7 Plato *Republic* bk vi 386d 388a / *Theaetetus* 536c 544a
8 Aristotle *Soul* bk iii ch 6 662d 663c ch 10 [433a21 28] 665d 666a
9 A istotl *Ethics* bk vi ch 2 [139a27 30] 387d 388a ch 3 [1139b 4 18] 388b
18 Au ustine *C fes ons* k x p r 9 76a b / *City f God* bk iii 1 6 269b c / *Ch i t an D ctri e* k i ch 9 627a
19 Aqui s *Summ The l gica* p rt i q 16 a 1 2 94b 96b q 17 a 3 102d 103c q 58 a 5 303c 304c q 85 a 6 458d 459c q 94 a 4 505 506a q 106 a 1 an 545d 546d q 107 a 2 ans 550b 551a p rt i i q 17 a 6 ans 690b d
31 Descartes *Rules* viii 13 b xii 18c 22c 23c / *Med tat o* iii 82a 86d esp 85c iv 89a 93a esp 90b 91b / *Object and Replies* 123d 125b 141 229d 230d
31 Spinoza *Ethi s* part ii prop 44 d monst 389b c corol de o t 390a op 48 391a c pro 49 sc iol 391d 394d
42 Kant *Pure Reason* 36b 37d 108 109c 110d 112d 115d 119 esp 118a c 174b d 193a b 233d 234b
53 Ja ie *P ychology* 867a 868b

3b(1) The truth of ideas concepts and definitions

7 Plato *Cratylus* 85a 114a c pass m esp 8 a 89a 104b 114a c / *Republic* bk ii 323c 324c bk vi 386d 388a / *Seventh Letter* 809c 810d
8 Aristotle *Categories* ch 4 [2 4 10] 6a / *Interpretation* ch 1 [16 9–18] 25a b / *To ics* bk vi ch 1 [139a24 b2] 192a b bk vi ch 4 bk vii ch 5 194c 211a c passim / *Metaphysics* bk v ch 29 [1024b27 38] 546d 547a bk vi ch 4 [1027b27 28] 550a bk ix ch 10 [1051b18-33] 577d 578a / *Soul* bk iii ch 6 [430a26-b5] 662d 663a [430b26–30] 663b-c
18 Augustine *Confes ions* bk x par 19 76a b / *Christian Doctrine* bk ii ch 35 653b-c
19 Aquinas *Summa Theologica* p rt i q 2 a 1 rep 2 10d 11d q 16 a 2 95c 96b q 17 a 3 102d 103c q 58 a 5 303c 304c q 85 a 1 rep 1 451c-453c a 6 458d-459c q 94 a 4 ans 505a 506a
23 Hobbes *Leviathan* part i 56b d
28 Galileo *Two New Sciences* third day 200a b
28 Harvey *On Animal Generation* 333b d
30 Bacon *Advancement of Learn ng* 57d 58b
31 Descartes *Rules* xii 21d 22a / *Medit tions* iii 82a 86d esp 83a 85c iv 90b c / *Objections a d Replies* def iii 130b axiom iv v 131d 132a 156d 158a
31 S inoza *Ethics* part i axiom 6 355d prop 8 schol 2 357b d part ii def 4 373b pro 32 43 385c 389b
33 Pascal *Vacuum* 373 b / *Geomet cal Demonstrat on* 430b 431b
35 Locke *Human Unders and ng* bk ii ch xxx xxxii 238a 248b pas im esp c i xxxii 243c 248b bk iii ch vi sect 43 47 280c 282b passim
36 Sterne *Tristram Sha dy* 234b-236b
42 Kant *Pu e Re son* 36b 77b d 85b 87c esp 86b 87c 91d 93b 179d 182b 193a 215d 217a 233d 234b / *Pref Met phys al Elements of Ethics* 367d 368a / *Judgement* 570b 572d
46 Hegel *Ph losophy of Right* intro par 1 2 9a 10a
53 Ja ies *Psy hology* 299a 302a esp 299b 302b [fn 1] 305a 312a esp 307a 308a 669a 671a esp 671b [fn 1]

3b(2) The truth of propositions the special problem of judgments about fut re contingencies

7 Plato *E thydemus* 71c 74a / *Cratylus* 85a 86b 109a b / *Sophist* 561d 577b esp 575a 577b
8 Aristotle *Categories* ch 4 [2 4 1] 6a ch 5 [4 10 b19] 8b 9a / *I te p etat on* c 1 [16 9 18] 25 b ch 4 14 26a 36d passim esp c 1 4 [17 1 4] 26b ch 7 26d 27d c 9 28a 29d ch 14 35c 36d / *Metaphy cs* bk iv ch 7 [1011b25 29] 531c [1012 1 17] 531d

532 CH 8 [1012 29 ^{b}22] 532b d BK VI CH 4 550a c K IX CH 10 [105 34 ^{b}18] 577c d / *So l* BK III CH 3 [427^{b}16-25] 660 CH 6 [430 26 ^{b}5] 662d 663a [430^{b}26-31] 663b c
9 ARISTOTLE *Ethics* BK II CH 7 [1107^{a}7 32] 352d 353a BK VI CH 2 [1139^{a}21 31] 387d 388a
19 AQU NAS *Summa Theologica* PART I Q 3 A 4 REP 2 16d 17c Q 13 A 12 ANS and REP 3 74c 75b Q 4 A 13 esp REP 3 80d 88c A 15 REP 3 89b 90b Q 16 A 2 95c 96b AA 7-8 99a 100d Q 17 AA 3 4 102d 104b Q 57 A 3 297b 298a Q 58 A 4 REP 2 302d 303 Q 85 A 1 REP 1 451c-453c A 5 R P 3 457d-458d A 6 458d 459c Q 86 A 4 463d-464d Q 94 A 4 ANS nd EP 5 505 506a
20 AQUINAS *Summa Theologica* PART I II Q 57 A 5 REP 3 39a-40a
22 CHAUC *Tro lu and Cress da* BK IV STANZA 147 54 107b-108b
23 HO ES *Leviathan* PART I 56b 57c
30 B CON *Advancement of Learning* 54c 55a 57d 58b
31 DESCAR ES *Rules* XII 22c 23b / *Discourse* PART IV 52a / *M d tations* III 83a 85c IV 90b 91b / *Objecti s and Repl e* 123d 125c D IX 130d 156d 157c 215d 216c 229d 230d
31 S I OZA *Ethics* PART II PROP 49 SCHOL, 392a 394a
35 LOCKE *Hum n Understand g* BK II CH XXXII SECT 1-3 243c 244a S CT 19 26 247a 248b K I CH VII S T 1 283a b BK IV CH V 329 331b CH VI SECT 3 331 d SECT 16 336d
35 HU E *Human Understanding* S T IV DIV 21 458b-c
42 KANT *Pure Reas n* 99 100a 108a d 193 c
53 J M S *Psych logy* 638b 640b 671 672a 884b 885a 889b 890a

3b(3) T th in re son ng the truth of prem ses n relat on to the truth of conclus ons logical alid ty nd truth about real ty

7 PLATO *Euthydemus* 65 84a c esp 67b 68d 71b 72c / *Ph ed* 236c 238a
8 ARI TOTLE *Pri r An lytics* K II C 2 4 72d 77a / *P ter A lytics* BK I CH 2 [7 ^{b} 6- 6] 98a b [72^{a}6-9] 98c [7 4 9] 98 d CH 10 104d 105d CH [77^b 6-34] 106d 107a / *Physics* BK CH 2 [85 5- 2] 259d CH 3 [186 4-9] 260d 261a BK VI I CH 1 [252 19-^{b}7] 335d 336b
9 ARI TO LE *Eth s* BK I CH 3 [1 94^b -8] 339d 340a CH 8 [98^{b}9-12] 344a K VI C 1 9 [14 ^{b}8 5] 391d [4 ^{b} 26] 392a BK VI CH 2 [1146^{a}23 3] 396b / *P etic* CH 24 [1460 9- 5] 696b
10 G LEN *N tu l Faculties* BK I CH 14 178 d
12 EPICTE US *Discourses* BK I CH 7 112b-113d
18 AUGUSTINE *Chri tian Doctri e* BK II CH 31 34 651d 653b
19 AQUINAS *Summa Th ologica* P RT I Q 84 A 3 RE 3 443d-444d Q 85 A 6 ANS 458d 459c
23 HOBBES *Leviathan* PART I 56b d 58d 59a 65c d PART IV 267b-c
30 BACON *Advancement of Le rni g* 57b-58a 59c-60b / *Novum Organum* BK I APH 14 107d 108a
31 DESCART S *Rules* III 4a d X 16d 17a X I 23b / *Object ons and Repl s* 126b 127c
31 SPINOZA *Ethics* PART I PROP 40 DE ONST 387a
35 LOCKE *Human Understand ng* BK II CH XI SECT 13 146b c
42 KANT *Pur Reason* 36a 37d 64d 65c 109b c 110d 111c 180c 182b 193a b 211c 218d
44 BOSWELL *Johnson* 134c d
51 TOLSTOY *War and Peace* EPI OGUE II 683d 684a
53 JAMES *Psychology* 295a b 526b [fn 1] 867a 882 esp 869a 870a 871b 872b 878b-880b

3c The pr nciple of contr diction as the fo n d t on of truth in judgment and in rea soning

7 PLATO *Protagoras* 53a / *Euthydemus* 72d 73b / *Republic* BK IV 350d 351b / *The tetus* 527a 528a / *Sophist* 558b d
8 ARI TOTLE *Cat go ies* H I [13^{b}1-35] 19a c / *Pr or A alytics* BK II CH 7 86b 87a / *Poster o Analyt cs* BK I CH 11 105d 106b / *M taphysics* K III CH 2 [996^{b}26-3] 515b K IV CH 3-6 524b 531c CH 8 [1 12 9-^{b} 2] 532b d K X CH 5-6 590a 592b
19 AQUIN S *Summa Th logica* ART I Q 58 A 4 REP 302d 303
20 AQUINA *Summa Theologica* ART I II Q 94 A 2 AN 221d 223a
30 BACON *Advan ement of Learning* 59c 60a
31 DE C RT S *Meditat s* III 82b d
31 SPINOZA *Ethics* ART II PROP 49 SCHOL, 393c d
35 LOCKE *Hum n Under tand g* BK I CH I SECT 16 99b c S CT 19- 0 100b d CH I SECT 3 113a b BK IV CH I SECT 1 309b d CH VI ECT 4 337b 338b S CT 8 11 338d 342d pas im
42 KAN *Pu e R* 17d 18d 36b 37b 64d 65 97a b 174b-d
53 JA ES *Psy hology* 639 641a

3d The n ture and causes of error

3d(1) The infallibility of the enses and the m nd the respects in wh ch they are in cap ble of er or

7 PLATO *Phaed* 224a-c / *Th tetus* 539a 540
8 ARI TOTL *M taphys cs* K IV CH 5 [0 ^{b} 15 9] 530b BK IX 10 [51^b 5 33]

(3d. The nat e and causes of error 3d(1) The nfallib l ty of the senses and the mind the respects in wh ch they a e incapable of error)

578a / Soul BK II CH 6 [418a6-18] 648d 649a BK III CH 3 [427b6 15] 659d 660a [428 5 429a2] 660b 661a CH 6 [430 26-b5] 662d 663a [430b26-30] 663b c CH 10 [433 21 28] 665d 666a / Sense and the Sensible C I 4 [442b4-9] 680a b

12 LUCRETIUS Nature of Th ngs BK I [693 700] 9c BK IV [379-521] 49a 51a

18 AUGUSTINE City of God BK XIX CH 18 523a b

19 AQUINAS Summa Th ologica PART I Q 17 AA 2 3 102a 103c Q 85 A I REP I 451c 453c A 6 458d-459c Q 94 A 4 505a 506a

20 AQUINAS Summa Theologica PART I II Q 94 A 4 ANS 223d 224d

23 HOBBES Levi athan PART I 56d

30 BACON Novum O g um BK I APH 16 108a

31 DESCARTES Rules x 22c 23b / Meditations II 77d 78b III 83 IV 89a 93a / Objections d Repl es 124b d 215b 216c 229d 230d

31 SPINOZ Ethics PART II P OP 43 47 388c 391a PROP 49 SCHOL 391d 394d passim

33 PASCAL Pens es 9 173b

35 LOCKE Human Understanding BK II CH XI SECT 3 144c d CH XXX SECT 2 238b c CH XXXI SECT 2 239b d CH XXXI SECT 14 17 245c 246

35 B RKELEY Human K owl dg S CT 40 420b SECT 88 430 b

35 HU IE Human Understa di g SECT VII DIV 52 473a

42 KANT Pure Reason 108a d 193a b 233d 234b

53 JAMES Psychol gy 125a 126a 361a b

3d(2) The nature and sources of error in hu m n perception and thought the dis tinction between error and ignor nce

7 PLATO Meno 180b 182a esp 181d 182a / Ph edo 224a 225a / Republic BK II 323c 324c K I 339b 340a / Th aetetu 520 522b 536 544a / S phist 557b 558d 575d 577b / Ph lebus 622d 626a

8 ARISTOTLE Prior A lytics K I CH 34 35 66b d BK II CH 6-21 85c 89b / Post ior Analytics K I CH 5 101b-102b I 12 [77b 6-34] 106d 107a CH 16 8 109b 111c / T p cs K I CH I [101 5 7] 143c d BK CH 3 [31b19-36] 182b c K VI CH 9 [148 2-9] 202a BK VIII CH 12 13 220c 221d / Sophist c l Ref utat o s 227a 253d / Phys s BK I CH 2 [185 5 12] 259d / Heavens BK I CH 5 [2 1b1 18] 362c d / Metaphy ics BK IV C I 5 [10 9 15 1010a14] 528c 529d CH 6 [I II 3 13] 530d CH 7 [10 2 18 2] 532 BK IX CH 10 [1051b 18 1052 4] 577d 578a c BK XI CH 6 [06 b 12 24] 590d 591a / Soul BK III C I I [425 30-b4] 657c C I 3 [427 6- 6] 659c d C I 6 [430 26-b5] 662d 663a CH 10 [433 21 8] 665d 666a / Sense and the Sensible C 4 [442b4-9] 680a b / Memory and Rem niscence CH I [451 8 12] 692 / D eams 702a 706d

9 ARISTOTLE Ethics BK III CH I [1110b17 1111a 20] 356b 357a CH 4 359a c BK VI CH 9 391c 392b / Rhetoric BK III CH 7 [1408 20-25] 6 9b

12 LUCRETIUS Nature of Thi gs BK IV [3 9-521] 49a 51a [1141-1191] 59a d

12 EPICTETUS Discourses BK I CH 7 112b 113d

14 PLUTARCH Ma cus Brut s 816d 817c

18 AUGUSTINE City of God BK XI CH 2 323c BK XIX CH 6 514b 515a CH 18 523a b / Christian Doctrine BK I CH 9 627a

19 AQUINAS Summa Theologica PART I Q 17 100d 104b Q 84 A 8 450b-451b Q 85 A I REP I 451c-453c A 6 458d-459c Q 89 5 ANS 477a-478b Q 94 A 4 505a 506a P I I II Q 5 A 8 REP 3 642d 643d

20 AQUINAS Summa Theologica PART I II Q 53 A I 19d 21a Q 72 A 5 ANS 115a 116b Q 88 A I ANS 193a 194b PART III SUPPL Q 82 A 3 ANS 971a 972d

21 DANTE Divine Comedy P RADISE XIII [112 120] 126c

23 HOBBES Leviathan PART I 51b 52b 56b d 57c d 58d 60a 78a 79b PART II 139c P RT III 172b d PART IV 258b d

25 MONTAIGNE Ess ys 269d 294b esp 270c 276 285c 292d 497c d 517d 518b

27 SHAKESPEARE Sonnets CXL III 608d 609a

28 GILBERT Loadstone BK V 105c

28 HARVEY Motion f the Heart 268a c / On A imal Generati n 333b d 335a-c 364a 365a esp 365a 411c d

30 BACON Advancement of Learning 13c 15a 16a 43d 44c 51b d 60b 61c esp 61b c 66c d 98c / Novum Organum BK I PH 12 107d APH 14 17 107d 108a API 20 108b APH 3 109a APH 38 70 109c 117a APH 8-92 119b 125d APH 104 106 128a c / New Atlan is 213d

31 DESC RTE Rules II 2d 3a XII 22c 23b / Med tations I II 75a 81d pass m III 83a IV 89 93a esp 91b VI 100a 103d / Obj ct o s and Replies 123d 126a 141 142c 215b-216c 229d 230d

31 SPINO A Ethics PART II PROP 17 SCHOL 381b d PROP 33 385c d PRO 35 385d 386b PROP 40-41 387a 388c PROP 47 SCHOL 390c 391a PROP 49 SCI OL 391d 394d passim PART IV PROP I 424c 425a

33 PASCAL Pensées 82 88 186b-189b / Geo metrical Demonstration 441 b

34 NEWTON Optics K I 384b 385b

35 LOCKE Human U derstand ng K II CH XX SECT 58 70 193d 197b CH XXXII SECT 19 247a b CH XXXIII 248b 251d esp SECT 18 251a c K III C I IX SECT 21 23 290c 9 c CH X 291d 300a passim esp SECT 9 293d 294 S CT 16 295d SECT 34 299d 300a CH XI CT I 7 300 301c BK IV CH V SECT

9 330d 331a CH VI SECT 16 336d CH VII SE T 12 20 342d 344d passim CH XVII SECT 12 13 378b CH XX 388d 394c
35 B RKELEY *Human Knowledge* INTRO 405a 412a,c passim esp S CT 1–4 405a d SECT 17–25 409d 412 c SECT 86–88 429c-430b
35 HUM *Human Understand ng* S CT I D V 6 7 453c-454 SECT V DIV 45 469c SECT VII D V 48 470d-471c
36 S RNE *T istram Shandy* 234b 236b
42 KANT *Pure Rea on* 1a-4 109b-c 133c 134d 193a b 200c 209d 219a 220b 224a 227 esp 224a c 226b d 229b-c / *Fu d Prin Metaphys c of Mo ls* 260d 261b / *Pra tical R a on* 294c 295d 302a d 348d 349a / *J dgement* 575b c
43 FEDERALI T NUMBER I 29d 30 NUMBER 31 103c 104 NUMB R 38 122a b
43 MILL *Liberty* 274b 293b pas im
44 BO W LL *J h on* 106d 126b
48 MELVILLE *Moby Dick* 313a b
51 TOL TOY *War d P a* K XIII 585b
53 JAMES *Psy hology* 240a 241b 264b 268a 460 469a esp 462b-464 468b 469a 506a 520 passim esp 508a 533a 538b 610b 625a p ssim esp 618b 621a 625a
54 FREUD *Interpretat o of Dr ms* 148d 149a 210c d 337a d 353d 355b esp 354c 355a 379b d / *Gener l Int duction* 472a c / *Ego a d Id* 700c 701d / *War a d Death* 760d 761 / *N w Introduct y Le ture* 819b c

3d(3) Rules for the correct on or prevent on of error in thought

7 PLAT *S phist* 557b 558d / *Stat sman* 582d 584a / *Ph leb s* 610d 613a
8 AR ST TLE *Topi s* 143a 223a / *Soph tic l Refutations* 227 253d
12 EP C ETUS *Dis ou es* BK CH 7 112b 113d
23 HO BES *Le tha* PART I 56b d 58d 60
28 HA V Y *M t on f the H art* 268a / *On An mal G ner tion* 331b 332 333b d 335 c
30 BAC N *Ad a ement f Learning* 11a 17b esp 13a 14c 15a 16b-c 33d 34b 43d 44c 47d 49b 51b d 60a 61d 64a 66a esp 64d 65a / *Novum Org um* 105a 195d esp K I APH 11 6 107d 108d A H 39–69 109c 116b A H 103 106 127d 128 APH 124 133c d / *New Atla t s* 213d
31 D ARTES *Rules* II XII 2a 25a / *D u se* 41a 67a esp PART II 47a 48a PART IV 51b 52a P RT VI 64d / *M dit t s* I 75 77c VI 103a d / *Objecti nd Repl* 206a-c
32 MILTON *Ar pagitica* 389b 390
33 PA C L *T u m* 365b 366a / *G met ical Demo st t* 430a-434a
35 L CK *Hum n U derst d g* BK I H XI 300a 306d
35 B RK LEY *Hum Knowledg* INTRO 405a 412a c pass m esp S T I 4 405a d SE 2 25 411b 412 c
35 HUME *Human Understanding* SECT I DIV 7 453c-454a DIV 10 455b SECT X I DIV 116 503d 504a
41 GIBBON *Decline and Fall* 299b
42 KANT *Pure Rea on* 5a 13d 101b d 129c 130a 209b 211c 218d 227a 248d 250a c esp 250a,c / *Practical Reason* 293c 294b esp 293d [n 3] 335b c 336d 337a c / *Judgement* 575b-c 600d 603d
43 MI L *Liberty* 276b 277a 283a 288c pass m
45 FARADAY *Researches n Electricity* 774d 775a

4 Compar son of the various d sciplines with respect to truth

4a Truth in science and religion the truth of re son and the truth of f th

18 AUGUSTIN *C ty of God* BK XI CH 2 323a c BK XIX CH 18 523a b
19 AQUIN S *Sum a Theol gica* PART I Q I AA 1 2 3b-4c
20 AQUINAS *Summa Th ologica* ART I I Q 109 A I 338b 339c PART I II Q I A I 380b 381a AA 3–5 381d 384b Q AA 3–4 392d 394b A 10 399b 400b Q 4 A I 402a 403d A 8 409a d
21 DAN E *Divine Comedy* PURGATORY III [6–45] 56a b P R. DISE II [25 148] 108a 109b passim
23 HO S *Leviathan* PART I 83b ART 274c d CONCLUSION 282c
25 MON NE *Essays* 80b-82b 208c 209c 212a 215a 238 239d 267c 268a 272d 273b 291b 294b
30 BACON *Advancement f Lea i g* 33c d 55b d 95d 101c
31 DESCART S *Di cours* PART I 43c / *Obje ti n and Replie* 125c 126 284d
32 MILTON *P rad Lost* K XII [552 587] 331 332a
33 PASCAL *Provincial Letter* 147b-148b 163a 166a / *Pensées* 434 248a 250a 846 339a b 857–858 342a 862–865 342b-343b / *Vacuum* 355b 356b 365b 366a / *G metr cal Dem strat on* 440 b
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35 HUM *H man U d stand g* SECT XI D V 1 2 497b d
38 ROU AU *In q lity* 333d 334a
40 G ON *Decl ne a d Fall* 190c d
42 KANT *Judgeme t* 601d 607c esp 601d 602a 603a b 604d 606d
43 M L *Utilit ri n sm* 455a c
46 HEG L *Ph l s phy of Right* ART par 360 113d 114a / *Ph los phy of History* NTRO 158 160b PA T V 349b 350b
48 MELVI LE *M by D k* 276 b 360b 361a
51 TOLSTOY *W a d P ce* BK V 196a 197c EP OGUE I 695d 696d

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18 AUGUSTINE *Confessions* BK IV par 2 19d BK V par 10 29b d / *Christian Doctrine* K II CH 36 653d BK IV CH 5 677a d CH 12 683d 684c
23 H BBES *Leviathan* PART I 67c
30 BACON *Ad a cement of Learni g* 12a c
31 D SCART S *Rules* X 16d 17a / *Discourse* PART VI 63c d
3 MILTON *Parad se Lost* BK I [108–118] 113b / *Areopagu ca* 382a 383a
35 LOCKE *Human U derstand ng* BK III CH X S CT 34 299d 300a
42 KANT *Pure Reason* 108a 109d
43 MILL *Liberty* 292b-293b

5 The eternal verities and the mutability of truth

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7 PLATO *Cratylus* 113c 114a / *Phaedrus* 125a b / *Men* 184d / *Theaet tus* 528b c
8 ARISTOTLE *Categories* CH 5 [4 10–b12] 8b 9a / *Poster or An lytics* K I CH 8 104a b / *Metaphysics* BK II H I [993b19–31] 512a b BK IX CH 10 [051b33 1052 12] 578 c
18 AUGU TINE *Confessions* BK I pa 6 2b-c par 9 3a b K XI par 9–11 91c 92b / *City of G d* K VIII CH 7 269 d / *Christ an Doctr e* K I CH 8 o 626c 627b BK II CH 38 654b c
19 AQUINAS *Summ Th log ca* PART I Q I A 3 REP 3 42c-43b Q 14 A 15 REP 3 89b-90b Q 16 AA 7–8 99a 100d Q 84 A I REP 3 440d 442a
20 AQUINAS *Summa Theologica* PART I II Q 93 A 2 216c 217b PART II II Q I A I CONTRARY 380b 381
23 HO B S *Leviathan* PART IV 267b
30 B CON *Ad ancement of Le rn ng* 27d 28c / *N m Org n m* K I APH 56 112a
31 DES ARTE *M d tat o* V 93b 94c / *Obj c t on d R pl es* 216d 217b 229 d
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33 PASCAL *Vacuum* 358b
35 LO K *H m n Under t d g* BK I CH I SECT 9 308 309b III CT 31 323 d CH XI E T 14 358b c
43 MILL *Liberty* 274b 293b pas m
46 HE EL *Philosophy f R ght* PR Id 2 6 7 P R III pa 2,0 85c DD TONS 115a d / *Ph l s phy of H tory* O 156d 157b 176b-c A T V 349b-350a
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51 TOLSTOY *War and Peace* BK V 216d 218b esp 217c
53 JA IES *Psychology* 879b-882a 889a 890a

6 The accumulation or accretion of truth and the correction of error in the progress of hum n learning

8 ARISTOTLE *S ph stical Refutations* CH 34 [183b16–184b8] 253a d / *Heavens* BK I CH 10 [279b4 12] 370d BK IV CH I [3 7b28–3 8 8] 399a b / *Metaphy ics* BK I CI 3 [983a33 b6] 501c d CH 7 506b-d CH 10 511c d BK II CH I 511b d 512b BK III CH I [995a23–b4] 513b d BK XII CH 10 [1075a25–1076 4] 606a d K XIII CH I [1076 8–17] 607a / *Soul* BK I CH 2 [403b20–23] 633a
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10 HIPPOCRATES *Regimen in Acute Diseases* par I 26a c
10 GALEN *Natu al Facult s* BK I CH 14 178d 179a CH 16 180 182b BK II CH 8 192a b CH 9 199 C BK III CH I 207b-d
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16 PTOLE IY *Almag st* BK I 6b
16 K PL R *Epitome* BK IV 846a 850a / *Har mon of the World* 1009b 1010a
18 AUGUSTIN *Co fess ons* K VII par 13 15 47c 48c / *City of God* K VIII CH 5 267d 268d CI 10–1 271a 272c / *Christian Doctr ne* Y II CH 40 655b 656a
20 AQU NAS *S mma Theologica* PART I II Q 97 A I ANS 236a d PART II II Q I A 7 385c 387a
23 HO B S *Leviathan* PART I 56b d PART I 114d 115a 164a c PART IV 267c 269b pass m CONCLUS ON 282b d
25 MONTA GN *E says* 271a-c 276b 278a
27 SHAK PEARE *Cori l nus* ACT II SC II [119–128] 367b
28 GILBERT *Loadstone* PREF 2b d
28 HARVEY *Mot on of the H a t* 267b d 269 274 b 279d 280c 293b d / *Ci culati n f the Bl d* 306a c / *On A imal Gener t on* 331a 332a 336d 337a 364a 365a 377a-c 433 457b
30 BACON *Adva ement of Le i g* 14c 15d 16 32a 47d-48d 64a b / *N um Orga um* BK I APH 56 112a APH 84 121b d APH 92 115 125b 130d passim
31 D CARTES *D course* 41a 67a esp PART 42b 44 ART I 46 48a PART III 49d 50b PART VI 60d 67a
32 M LTON *A p g t a* 381a-412b esp 384b 389 398 b 404a b
33 PA C L *Vac m* 357a 358a
35 LO K *H ma Underst ding* 85a-c 89a b
36 SW T *G ll er* P RT II 118 119
36 STERN *T t m Sh dy* 224b 225a
38 ROUS U *Inequal ty* 330a d 346d 347a

(6 *The accumulation or accretion of truth and the correction of error in the progress of human learning*)

40 GIBBON *Decline and Fall* 23d 24a
41 GIBBON *Decline and Fall* 274a d 298a 300b
42 KANT *Pure Reason* 1d 2b [fn 2] 5d 6c 220b 221b 248d 250a c / *Practical Reason* 336d 337a c / *Judgement* 513d 514b
43 MILL *Liberty* 274b 293b passim esp 280a c 288d 290a
44 BOSWELL *Johnson* 129a 222a
45 FARADAY *Researches in Electricity* 332a b 391b-c
49 DARWIN *Descent of Man* 590a
51 TOLSTOY *War and Peace* BK V 196a b BK IX 342b 343a
53 JAMES *Psychology* 37b 125b 126a
54 FREUD *Psycho Analytic Therapy* 125d 126a / *General Introduction* 550d 551a / *New Introductory Lectures* 880d 881c

7 The skeptical denial of truth

7a The impossibility of knowing the truth the restriction of all human judgments to degrees of probability the denial of axioms and of the possibility of demonstration

7 PLATO *Euthydemus* 72d 73a / *Cratylus* 86a d 107d 109a / *Phaedo* 236c 238a / *Theaetetus* 517b 532 passim esp 517b-c 522b 525a 526c 531b 532a
8 ARISTOTLE *Posterior Analytics* BK I CH 3 [72b5-33] 99b c / *Metaphysics* BK IV CH 3-8 524b-532d BK X CH 1 [1053 31 b3] 580a CH 6 [1057a7 11] 584b BK X CH 5-6 590a 592b
12 LUCRETIUS *Nature of Things* BK IV [469-477] 50b
12 EPICTETUS *Discourses* BK II CH 20 164c 166c
18 AUGUSTINE *Confessions* BK V par 19 32b c / *City of God* BK XIX CH 18 523a b
19 AQUINAS *Summa Theologica* PART I Q 16 A I REP 2 94b 95c Q 84 A I ANS 440d 442a Q 85 A 2 ANS 453d 455b
25 MONTAIGNE *Essays* 80b 82b 208a 294b esp 240c 246a 257d 264 270a 279c 285c 294b 308c d 318 319b 439c 440a 497d 502c 517b-519a
30 BACON *Advancement of Learning* 57d 58b / *Novum Organum* BK I APH 67 115d 116a
31 DESCARTES *Objections and Replies* 272a 273a
33 PASCAL *Pensées* 72 181 184b c p 182b 381 385 238b 239a
35 BERKELEY *Human Knowledge* INTRO SECT 1 2 405a b SECT 86-88 429c 430b SECT 101 102 432c-433
35 HUME *Human Understanding* SECT I DIV 26 460b c SECT IV DIV 28 SECT V DIV 38 460d 466c esp SECT V DIV 34 463d 464b SECT VII IV 60 477a-c SECT XII 503 509d
42 KANT *Pure Reason* 129c 130a 218d 222b 224a 227a / *Practical Reason* 294c 295d 311d 313d
46 HEGEL *Philosophy of Right* PREF 2b-c 3b-5c 7a PART I par 44 23c PART III par 270 86b c / *Philosophy of History* INTRO 159b-c
47 GOETHE *Faust* PART I [354 429] 11a 12b [656-675] 17b 18a [1064 1067] 26b [1908-1945] 45b 46a
50 MARX ENGELS *Communist Manifesto* 427a b 428b d
51 TOLSTOY *War and Peace* BK V 194b-195a
53 JAMES *Psychology* 884b 886
54 FREUD *New Introductory Lectures* 881d 882a

7b The defense of truth against the skeptic

7 PLATO *Cratylus* 86b d 113c 114a c / *Meno* 179b 183b esp 179d 180b 182c 183b / *Theaetetus* 517b 532c esp 527b-528c
8 ARISTOTLE *Metaphysics* BK IV CH 4-8 525a 532d BK XI CH 6 590d 592b
12 LUCRETIUS *Nature of Things* BK IV [469-521] 50b-51a
12 EPICTETUS *Discourses* BK II CH 20 164c 166c
18 AUGUSTINE *City of God* BK XIX CH 18 523a b
19 AQUINAS *Summa Theologica* PART I Q 2 A I REP 3 10d 11d Q 16 A I REP 2 94b 95c Q 85 A 2 ANS 453d 455b
30 BACON *Advancement of Learning* 13a-c 5d 58b / *Novum Organum* BK I APH 67 115d 116a
31 DESCARTES *Meditations* V 95d 96a / *Objections and Replies* 206c 207a 272a 273a
33 PASCAL *Pensées* 378 238a 912-922 349b 351b
35 LOCKE *Human Understanding* INTRO SECT 4-7 94a 95c esp SECT 7 95a c
35 BERKELEY *Human Knowledge* PREF 404a INTRO SECT 1-5 405a d SECT 40 420b SECT 85-91 429c 431a SECT 101 102 432c 433a SECT 133 439c-440a
35 HUME *Human Understanding* SECT I DIV 8-9 454b 455a SECT XII DIV 126 128 507a 508a
42 KANT *Pure Reason* 129c 130 200c 218d 222b 224a 227a / *Practical Reason* 294c 295d 311d 313d
44 BOSWELL *Johnson* 121c d 126b
46 HEGEL *Philosophy of Right* PREF 3b-5c 7a PART III par 272 90a
53 JAMES *Psychology* 671 672a
54 FREUD *New Introductory Lectures* 881d 882b

8 The moral and political aspect of truth

8a Prevarication and perjury the injustice of lying or bearing false witness

OLD TESTAMENT *Genesis* 4 8 10 27 397 / *Exodus* 20 16 23 1 7 / *Leviticus* 6 2 7 19 11 12 / *Deuteronomy* 5 20 19 15 21 / *II Chronicles* 18—(D) *II Paralipomenon* 18 / *Job* 8 1 18 27 3 4 8 10 / *Psalms* 5 6 15 1 2 24 3 4 31 18 34 11 13 43 1 50 16-21 52 1-5 55 23 101 7 119 29-3 120 1 3— (D) *Psalms* 5 7 14 1 3 23 3 4 30 19 33 12

8b The exped ency of the political l e

8c T uth n rel t on to love nd f ndship the pl s nt nd the unple nt truth

18 AUGUSTI E *Confess ons* BK I par 1 1a b BK III par 6– 0 14b-15d BK V par 1 13 30a c par 3–25 33c 34c BK VI par 7–8 36d 37c BK VII par 24 50d 51a BK VIII par 9–30 60d 61c BK X par 33 34 79d 80c / *City of God* K VIII CH 27 284d 285d
19 AQUINAS *Summa Theologica* PART I Q 82 A 3 REP I 433 -434 PART I II Q 29 A 5 747c 748b
20 AQUINAS *Summa Theologica* PART I II Q 100 A 5 REP 5 255a 257c PART II SUPPL Q 96 A 6 REP 10 1058a 1061b A 7 1061b-1062 A I A 5 1063d 1064d
22 C AUCER *Prologu* [285 308] 164a b / *Seco d Nun s Tale* 463b-471b
25 M NTAIGNE *Essays* 446d-450a
28 HARV Y *Motion of the Heart* 268a d / *Cir culation of the Blood* 313a b / *On Animal Generation* 331c 332a 457b
30 BAC N *N um Orga um* BK I APH 71 117a c
31 D SCA TES *Rules* VIII 13d 14a / *Discourse* P RT I 41d 42a PART III 51b
32 MILTON *Parad se Lost* BK VI [29–43] 197a K XII [552 573] 331a b
33 PASC L *Pensées* 261 221a 582–583 276b 864 343b
35 LOCKE *Human Understandi g* 87a b BK II CH XX S CT 74 199c d BK III CH X SECT 34 300a BK IV CH XIX ECT I 384c d
38 ROUSSEAU *S ci l Contract* BK II 395d 396
40 GI BON *Decl ne and Fall* 217a 220d esp 219c 220d 327d 328b
41 GIBBON *De line and Fall* 499c 526c d
42 KANT *Pu e Reas n* 187 188b 221c 222b / *Practical Reason* 299d 335b-c 337c 338b / *Pref Metaphys cal Elements of Eth cs* 365b [fn 1] / *Judgement* 551d 552a
43 MILL *Liberty* 278c 283c
44 BOSWELL *Johnson* 4b-c 151b-c 221d 224a
46 HEGEL *Ph losophy f Right* PREF 1d 2a 4b 5c / *Philosophy of History* INTRO 158c 160b PART II 276a d 279d 281a PART III 308b-c
47 GOETHE *Faust* PART I [586–593] 16a b
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The significance of the distinction between theoretic and practical truth *see* JUDGMENT 2 KNOWLEDGE 6e(1) PHILOSOPHY 2a PRUDENCE 2a SCIENCE 3a WISDO 1 1b

Discussions of what is involved in the comparison of human and divine truth *see* GOD 5f INFINITY 7d KNOWLEDGE 7a WISDOM 1d

Matters surrounding the distinction between truth and probability and the related distinc tion between kno vledge and opinion *see* JUDGMENT 9 KNOWLEDGE 6d(1)–6d(3) NECESSITY AND CONTINGENCY 4a OPINION 3–3b

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The theory of erro its nature and causes and the respects in which the human mind is fallible or infallible *see* KNOWLEDGE 4a MIND 5a SENSE 4d 4d(2) and for the suggestion of various methods of saving the mind from error *s e* KNOWLEDGE 5d–5e LANGUAGE 6 LOGIC 4 MIND 5b REASONING 3b–3c SIGN AND SYMBOL 4c

Discussions relevant to the contrast between truth in one d scipline and truth in another *see* DIALECTIC 5 HISTORY 3a MATHEMATICS 1c OPINION 4a PO TRY 8a(2) RHETORIC 5a THEOLOGY 4b

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For Another consideration of truth as a source of moral or spiritual freedom *see* LIBERTY 3b and for freedom of thought and discussion as a condition of discovering the truth *see* KNOWLEDGE 9b LIBERTY 2a–2b OPINION 5b PROGRESS 6e

The love of truth and its pursuit as the distinguishing marks of the philosopher *see* LOVE 1d PHILOSOPHY 6a WISDOM 3

ADDITIONAL READINGS

Listed belo are works not included in *Great Books of the Western Wo ld* but rele ant to the idea and topics w th hich th s chapter deals These works are di ided into two groups

I Works by authors represented n th s c llection
II Works by authors not represented in th s collection

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Chapter 95 TYRANNY

INTRODUCTION

IF any point in political theory is indisputable it would seem to be that tyranny is the worst corruption of government—a vicious misuse of power and a violent abuse of the human beings who are subject to it Aristotle's remark that no freeman if he can escape from it will endure such government would seem to express the sentiments of all who loving liberty and abhoring slavery look upon tyranny as destroying the one and establishing the other

Certainly the word tyranny is seldom if ever used eulogistically Such phrases as a just tyranny or a good tyrant are at once seen to be as self contradictory as a round square The great books of history give the impression that tyrants and despots who vastly outnumber good rulers are always objects of hate and fear never of love and admiration If there are exceptions if there are peoples who willingly submit to or even deserve the yoke of despotism and tyranny they are in the judgment of ancients and moderns alike politically primitive

The traditional association of the word despotism with tyranny requires us to consider whether our understanding of these terms is as uniformly clear as the denunciation of what they denote seems to be universal Are despotism and tyranny the same? It may be thought that the tyrant must always have despotic power at his disposal power unlimited by law so that the lawless ruler is at once both despot and tyrant But need the despot the absolute ruler always rule tyrannically?

The familiar phrase benevolent despotism at once suggests the negative answer and also some line of distinction between despotism and tyranny Tyranny can never be benevolent But despotism may be no worse than paternalism While its injustice may consist in treating adults able to govern themselves as if they were children it may also derive an air of justice from the fact that the despot like the father rules his subjects for their own good If he treats them like slaves rather than children exploiting them to serve his own interests then he is not a benevolent but a tyrannical despot

This understanding of the meaning of despotism and tyranny seems to be only partly supported by their etymology The Greek word from which despot comes signifies the head of a household the *paterfamilias* (as he is called by the Romans) who exercises the absolute authority of a master over chattel slaves and of a parent over his children. In contrast the Greek word *tyrannos* refers to the ruler of a state rather than a family and is sometimes used as if it were equivalent in meaning to king Yet both words carry the connotation of absolute power and when in addition the subjects of a tyrant are considered to be no better off than slaves the difference in the meaning of the two words almost disappears

The difficulty of grasping what is essential to the nature of tyranny and despotism seems to be complicated by certain criteria originally proposed by the Greeks for distinguishing between king and tyrant or between royal and despotic rule Both Plato and Aristotle speak of the king as a good monarch and the tyrant as a bad one Both say that monarchy or rule by a single man is royal when it is for the welfare of the ruled and tyrannical when it serves only the interests of the ruler Both make lawlessness—either a violation of existing laws or government by personal fiat without settled laws—a mark of tyranny

Yet for Aristotle at least some of these criteria also apply to despotism and even to royal government insofar as these are distinguished from political or constitutional government—government by law rather than by men Furthermore the association of either tyranny or

despotism with monarchy—rule by *one* man whether just or unjust—seems to be counterbalanced by Aristotle s discussion of the tyranny of the *few* and of the *many* In a monarchy the king can turn tyrant but so can the wealthy become despotic in an oligarchy or the poor in a lawless democracy

The nature of tyranny thus seems to be more difficult to define precisely than would at first appear from the almost universal condemnation of it as the worst perversion of government

To some extent the difficulties may be verbal The word tyranny is used with many meanings not only by the Greeks but throughout the tradition of the great books Some writers identify tyranny and despotism some distinguish the two sharply Some writers consider tyranny and despotism only in connection with monarchy some extend the consideration to other forms of government The words are sometimes used descriptively without the connotation of good or evil and sometimes they are more derogatory than descriptive

Even when the necessary verbal clarifications are achieved genuine issues still remain Conflicting accounts are given of the causes of tyranny or the circumstances from which it develops Concerning despotism some writers take the position that it may be justified by conquest or by the need of a people for absolute government or in the form of a temporary dictatorship by emergency conditions Not even the condemnation of tyranny seems to be unanimous if the views of Hobbes are to be reckoned with nor among those who condemn tyranny is the fairly general approval of tyrannicide free from the strong dissenting voice of Kant

THE FOREGOING INDICATES how the notions of tyranny and despotism are involved in other chapters dealing with the various forms of government and in addition such chapters as JUSTICE LIBERTY and SLAVERY The distinction for example between domestic and political slavery bears on one of the ways in which despotism and tyranny are distinguished and the discussion in the chapters on MONARCHY and CONSTITUTION concerning absolute and limited government raises a question which must also be considered here namely whether absolute monarchy can be distinguished from despotism and whether it has an inveterate tendency to become tyrannical

That question deserves immediate attention, because its answers are connected with opposed views of the justice or defensibility of tyranny and despotism Plato and Aristotle for example treat tyranny as the prototype of political injustice and the tyrant as the extreme case of the vicious man yet there are passages which appear to have a contrary tenor In the *Laws* the Athenian Stranger proposes a good tyrant as the best means for establishing the laws To the question What are the conditions which you require in a state before you can organize it? he thinks the legislator s answer should be Give me a state which is governed by a tyrant and let the tyrant be young and have a good memory let him be quick at learning and of a courageous and noble nature —in short let him have temperance and every other virtue

More readily than monarchy, democracy or oligarchy tyranny is the stepping stone to the best state according to the Athenian Stranger because it involves the greatest power concentrated in a single man The combination of virtue and power may rarely be found but he says when the supreme power in man coincides with the greatest wisdom and temperance then the best laws and the best constitution come into being and in no other way

Aristotle s classification of the types of kingship or the forms of royal government seems to include tyranny among them He refers to the kind of monarchy which prevails among the barbarians who being more servile in character than Hellenes do not rebel against a despotic government Such royalties he goes on have the nature of tyrannies because the people are by nature slaves but there is no danger of their being overthrown for they are hereditary and legal Even among the Hellenes in ancient times Aristotle points out there was a form of monarchy or dictatorship that may be defined as an elective tyranny which like the barbarian monarchy is legal but differs from it in not being hereditary

These two forms of tyranny Aristotle says elsewhere are both according to law and therefore easily pass into royalty The line be-

tween king and tyrant is not however as shad owy as might first appear Kings rule accord ing to law over voluntary subjects but tyrants over involuntary and the one are guarded by their fellow citizens the others are guarded a ainst them The forms of monarchy which Aristotle also calls tyrannies seem to him to have a mixed character They are royal he says in so far as the monarch rules according to law over willing subjects but they are ty rannical in so far as he is despotic and rules ac cording to his own fancy But there is also a kind of tyranny which being unmixed is the counterpart of perfect monarchy This tyranny is just that arbitrary power of an individual which is responsible to no one and governs all alike whether equals or better with a view to its own advantage not to that of its subjects and therefore against their will

Aristotle explains his association of tyranny with monarchy on the ground that both are forms of one man rule but he adds there is the greatest difference between them the ty rant looks to his own advantage the king to that of his subjects Tyrannical government is monarchy exercising the rule of a master over political society and therefore deserves to be called despotic as well as tyrannical When it has no admixture of royalty tyranny is not only self serving but lawless rule It is the very reverse of a constitution or rule by law Except for the hypothetical case in which the truly superior the almost god like man is king Aristotle seems to identify abso lute or unconstitutional monarchy with tyr anny and despotism and he condemns both for violating the very nature of the state con ceived as a community of free men

THE LINE BETWEEN KING and tyrant is sim larly drawn by Plato Monarchy for him d v des into royalty and tyranny according as one man rules by law or lawlessly over voluntary or involuntary subjects If the one m n were like a god in relation to other men it would be fitting for him to rule the state by his wisdom or science and without recourse to laws If there could be such a despot the Eleatic Stranger says in the *Statesman* he alone would be the happy ruler of a true and perf ct state but men can never be made to bel eve that any one can be worthy of such authority (History suggests the contrary in such cases as Caesar Napoleon and Hitler)

Giving the name of king to the monarch who abides by and maintains established laws the Stranger gets Socrates to agree that the ruler should be called a tyrant when he gov erns neither by law nor by custom but imitat ing the true man of science pretends that he can only act for the best by violating the laws while in reality appetite and ignorance are the motives of the imitation

In the *Republic* Socrates refers to Euripides praise of tyranny as god like and gives as another reason for excluding the poets from the state the fact that they are the eulogists of tyranny Far from being god like the tyran nical man is described by Socrates as drunken lustful passionate Tyrants are always either the masters or servants and never the friends of anybody the tyrant never tastes of true free dom or friendship Oriental despotism Hegel later writes appears to give freedom to one man but the freedom of that one is only ca price ferocity—brutal recklessness of passion That *one* is therefore only a despot not a *free man*

According to Plato tyranny is not only the greatest evil a state can suffer but the tyrant is also the unhappiest of men Will not he who has been shown to be the wickedest Soc rates ask be also the most miserable? Polus in the *Gorgias* tries to prove that like the succe sful criminal who goes unpunished the tyrant who does injustice to everybody but suffers none achieves more happiness than other men But Socrates taking the position that it is better to suffer than to do injustice argues to the contrary that the tyrant is more miserable than those whom he oppresses

If th s is true the confirmed tyrant is prob ably the m n least able to perceive or acknowl edge it Plutarch reports the story of Plato s first meeting with Dionysius the tyrant of Syra cuse When Plato tried to prove to him that tyrants of all men had the least pretence to virtue and that since they lacked just ce they suffered the miserable condition of the unjust D onysius would not l ear the argu m nt out He asked the ph losopher in a rage Plutarch relates what bus n ss he had in Sic

ily To which Plato answered I come to seek a virtuous man It seems then replied Dionysius you have lost your labor According to Plutarch Dionysius tried to have Plato killed on his return voyage to Greece or failing that to have him sold into slavery He would not be harmed by that Dionysius reasoned because being the same just man as before he would enjoy his happiness though he lost his liberty

ON THE WHOLE THEN Aristotle s and Plato s disapproval of tyrants and tyranny seems to be unequivocal The passages which might cause this to be questioned can perhaps be accounted for by the ancient tendency to use the word tyrant descriptively to denote the possessor of absolute power Yet even in the *Laws* where such usage occurs Plato observes that kings unable to sustain the temptation of arbitrary power tend to overthrow the laws and so become tyrannical in the invidious sense of the word

With the exception of Hobbes mediaeval and modern writers are no less disapproving than the ancients Tyrannical government according to Aquinas is altogether corrupt and completely lawless It is the tyrant himself rather than those who may rebel against a government so lacking in justice who is guilty of sedition since he encourages discord and sedition among his subjects that he may lord over them more securely When a king by becoming a tyrant has dethroned himself and put himself in a state of war with his people what shall hinder them asks Locke from prosecuting him who is no king as they would any other man who has put himself in a state of war with them?

In Locke s view it is a mistake to think that the fault of tyranny is proper only to monarchies For wherever the power that is put in any hands for the government of the people and the preservation of their properties is applied to other ends and made use of to impoverish harass or subdue them to the arbitrary irregular commands of those that have it there it presently becomes tyranny whether those that thus use it are one or many Wherever law ends tyranny begins if the law be transgressed to another s harm

Tyranny is thus defined by Locke as the exercise of power beyond right which nobody can have a right to Such absolute arbitrary power or governing without settled standing laws can neither of them consist with the ends of society and government Tyranny so defined may not be limited to monarchies but according to Locke absolute monarchy is always tyrannical For that very reason it is he writes inconsistent with civil society and so can be no form of civil government at all

What Locke calls tyranny or without change of meaning absolute monarchy Kant calls autocracy But Kant distinguishes the monarch who has the *highest* power from the autocrat who has *all* power Hegel calls despotism that state of affairs where law has disappeared and where the particular will as such whether of a monarch or a mob counts as law or rather takes the place of law The writers of the *Federalist* use the words tyranny and despotism interchangeably but do not vary from the definition which Montesquieu gives of despotic government as that in which a single person directs everything by his own will and caprice In all other governments even in monarchy when it is constitutional the separation of powers puts some limitation on the power entrusted to the offices of state

Following Montesquieu s doctrine Madison declares The accumulation of all powers legislative executive and judiciary in the same hands whether of one a few or many and whether hereditary self appointed or elective may justly be pronounced the very definition of tyranny He reinforces his point by quoting Jefferson s dictum that concentrating all the powers of government in the same hands is precisely the definition of despotic government

HOBBES SEEMS TO BE the one exception in the great books to this variously expressed opinion of the evil of absolute power Locke may have him in mind when he says that absolute monarchy is by some men counted the only government in the world Certainly Hobbes would not repudiate the charge that he thinks none but absolute government feasible nor is he dismayed by the tendency of other writers

to call absolute government tyrannical or despotic On the contrary he dismisses this as so much empty name calling

In every form of government according to Hobbes the sovereign power must be absolute to be effective Though of so unlimited a pow er men may fancy many evil consequences yet the consequences of the want of it which is perpetual war of every man against his neigh bor are much worse Describing the absolute dominion of the father over his children and the equally absolute dominion of the master over his slaves Hobbes says that the rights and consequences of both paternal and desporti cal dominion are the very same with those of a sovereign by institution for unless the sover eign is also absolute there is no sovereignty at all

To the cry Tyranny Hobbes replies that just as men who find themselves grieved under a *Democracy* call it *Anarchy* or those who are displeased with *Aristocracy* call it *Oligarchy* so they that are discontented under *Monarchy* call it *Tyranny* He holds Aristotle s *Politics* responsible for spreading the fallacy of regarding anything except popular government as tyrannical and in general he blames the Greek and Roman writers for fomenting sedi tion against kings by treating tyrannicide as lawful

Hobbes offers an historical explanation of the origin of these confusions A *Tyrant* he writes originally signified no more simply but a *Monarch* But when afterwards in most parts of Greece that kind of government was abolished the name began to signify not only the thing it did before but with it the hatred which the popular states bore towards it as also the name of King became od ous after the deposing of the Kings of Rome

A word like tyranny carries only emotional force Used descriptively Hobbes declares it s gnifies noth ng more nor less than the name of Sovereignty saving that they that use the for mer word a e understood to be angry with them they call Tyrants He is willing to make him self the object of that anger by identifying a professed h tred of Tyranny with hatred to Commonwealth in general and by egarding the toleration of both hatreds alike as evil seeds of sedition

IN ONE NEGATIVE RESPECT Rousseau seems to agree with Hobbes Not that the man who holds that only republican institutions are legitimate in any way accepts the identification of either prince or popular government with sovereign power But he like Hobbes rejects Aristotle s distinction between the king and the tyrant as good and bad monarchs the one governing for the good of his subjects the other in his own interest Rousseau contends not only that most Greek authors used the word *tyrant* in a dif ferent sense but also he adds it would follow from Aristotle s distinction that from the very beginning of the world there has not yet been a single king

It is only according to a vulgar usage that a tyrant is conceived as a king who governs violently and without regard for justice or law The more precise conception Rousseau insists defines the tyrant as an individual who arro gates to himself the royal authority without having a right to it This is how the Greeks understood the word tyrant they applied it in differently to good and bad princes whose au thority was not legitimate *Tyrant* and *usurper* are thus perfectly synonymous terms

The usurpation of power is according to Rousseau the root of both tyranny and des potism but they are not for that reason to be confused I call him who usurps the royal au thority a tyrant Rousseau writes and him who usurps the sovereign power a *despot* The tyrant is he who thrusts himself in contrary to the laws to govern in accordance with the laws the despot is he who sets himself above the laws themselves Thus the tyrant cannot be a despot but the despot is always a tyrant

Other writers d stinguish between tyranny and despotism on different principles They ac cept where Rousseau rejects the notion that tyranny is not me ely a usurpat on of power but always a self serving or unjust use of that power They reject Rousseau s conception of despotism as inseparable from usurpation Ab solute power can be gained and held in other ways

Locke for example conceives d spot cal do minion as the rule of a master ove slaves or the government of a vanquished people by their conquerors n a ju t war Despotical power in his opinion s an absolute arbitrary power

one man has over another to take away his life whenever he pleases Unlike tyranny it is not power beyond right for the conqueror if he have a just cause has a despotical right over the persons of all that actually aided and con curred in the war against him Since in Locke s view a usurper can never have right on his side despotic dominion when justified is not achieved by usurpation

For Montesquieu despotisms constitute one of the three major forms of government the other two being republics (aristocratic or demo cratic) and monarchies Though he regards des potism as an intrinsically corrupt form of gov ernment in which the rulers wield personal power without the restraint of law he also judges it to be appropriate to the servile na tures or temperaments of certain peoples Like Aristotle and Hippocrates before him he at tributes to the climate and disposition of the Asiatic peoples their submissiveness to the worst excesses of despotism

Montesquieu does not so much condemn despotism as he deplores the conditions which seem to render it necessary or natural for a large part of mankind He does not suggest as Mill does that despotic government can and should serve to civilize those who are as yet unprepared for self government Despotism is benevolent according to Mill only if it prepares a people for freedom if it tries to perpetuate itself it is tyrannical or enslaving

Though Mill holds the view that relative to a free society there cannot be a good despot no matter how benevolent his intentions he also thinks that in dealing with barbarians des potism is a legitimate mode of government provided the end be their improvement and the means justified by actually effecting that end Liberty as a principle has no application to any state of things anterior to the time when mankind has become capable of being improved by free and equal discussion Until then there is nothing for them but implicit obedience to an Akbar or a Charlemagne if they are so for tunate as to find one

Under certain conditions of society a vigorous despotism according to Mill is in itself the best mode of government for training the people in what is specifically wanting to render them capable of a higher civilization In his opinion still other conditions justify des potism I am far from condemning he writes, in cases of extreme exigency the assumption of absolute power in the form of a temporary dictatorship In another place he says that the establishment of the despotism of the Cae sars was a great benefit to the entire generation in which it took place because it put a stop to civil war and abated a vast amount of malver sation and tyranny by praetors and proconsuls

But in all these cases the essential point is that the despotic rule should be temporary Mill ap plies the same criterion to the despotism which occurs in the government of colonial dependen cies It should aim to benefit a subject people by training them in the arts of government and it should not seek to outlast the conferring of this benefit The ruling country he thinks, ought to be able to do for its subjects all that could be done by a succession of absolute mon archs guaranteed by irresistible force against the precariousness of tenure of barbarian des potisms Such is the ideal rule of a free peo ple over a barbarous or semi barbarous one

This may be the ideal but critics of imperial ism like Swift or Marx think that colonial policies are in fact otherwise motivated—by land grabbing by the desire for national ag grandizement and by the profits to be made from the economic exploitation of colonies or subject peoples Throughout the pages of Thu cydides and Tacitus the spokesmen for empire dwell upon the blessings which Athenian or Roman rule bestow only to be answered by the protests of the colonists or the conquered who seem to prefer the insecurities and uncer tainties of liberty to the mixed motives of even the best despot

As already indicated the political signifi cance of tyranny and despotism is broader than the conception of the tyrant as an unjust king or of the despot as an absolute monarch The reign of the Thirty Tyrants at Athens and of the Decemviri at Rome are classical examples of oligarchical tyranny Advocates of republi can or democratic institutions like the writers of the *Federalist* or J S Mill are as much con cerned to safeguard constitutional or represent ative government from the tyranny of special interests—whether of a dominant majority or

of concentrated wealth—as they are to protect the rule of law from the encroachments of despotism which begin with usurpations of power by elected officials

Moderns and ancients alike fear the susceptibility of the mob to the wiles of the demagogue who encourages their lawlessness in order to take the law into his own hands Both Hegel and Plato see in the alliance between a scheming demagogue and an unruly populace the step by which a corrupt democracy turns into a tyranny Though Aristotle disagrees with what he takes to be the theory of Socrates in the *Republic* that tyranny normally arises from democracy in the progressive degeneration of the state his own opinion seems to be that tyr anny is a compound of oligarchy and democracy in their most extreme forms and that almost *all tyrants have been demagogues who gained* the favor of the people by their accusation of the notables

These aspects of tyranny are discussed in the chapters on DEMOCRACY and OLIGARCHY The traditional emphasis however is on the individual tyrant whether he is an hereditary prince who misuses his autocratic power the usurper of an established throne or the demagogue who makes himself dictator However tyranny arises monarchy is the form it usually takes in the pages of history or poetry—the domination of the state by one man. But while the great political philosophers offer conflicting theories of the origin of tyranny there seems to be remarkable agreement concerning the methods the tyrant uses to maintain himself in power

Other political practices may vary greatly from one historical epoch to another but the devices of tyranny seem to have a certain timelessness When they are describing the actions of the tyrant Herodotus Plutarch Tacitus and Gibbon tell stories of iniquity of cruelty of cowardly and unscrupulous stratagems so alike in detail that the reader loses all sense of time and place Nor need he exert any effort of imagination to place the figure of the tyrant thus delineated in the setting of contemporary events

The past also speaks with contemporary relevance in Plato s enumeration of the tyrant s desperate measures his stirring up of foreign wars to smother domestic discord his assassination of enemies his purging of friends or followers, and his confiscation of property as well as his generally indiscriminate blood letting The resort to unwarranted searches and seizures the creation of *ex post facto* crimes the arrest and punishment of men without trial have been writes Hamilton in all ages the favorite and most formidable instruments of tyranny So too in all ages the tyrant fearing reprisal and revenge lives in a state of war turns his palace into an armed camp and goes nowhere without a numerous bodyguard which as both Aristotle and Machiavelli suggest functions most efficiently when composed of hirelings or mercenaries

The great books contain not only the record of tyrannical perfidy and violence but also rec*ommendations to the would be tyrant of the* best means to use for his nefarious purposes Though Rousseau refers to Machiavelli s *Prince* as the book of Republicans and thinks that the choice of his detestable hero Caesar Borgia clearly enough shows his hidden aim the rules which Machiavelli formulates for the prince seem on the surface at least to be essentially similar to the advice Aristotle gives the tyrant

The end in both cases is the same—success in the effort to gain and keep power The means in general are force and fraud or as Machiavelli phrases it the methods of the lion and the fox Machiavelli counsels the prince to inspire fear in such a way that if he does not win love he avoids hatred He tells him that he should appear to keep faith without hesitating to break his promises that he should avoid flatterers and sycophants and that he should acquire a reputation for liberality without cost to himself Not very different is Aristotle s ad vice to the tyrant—to lop off the heads of those who are too high and to humble all the rest to sow discord among his subjects to impoverish the people by multiplying taxes to employ informers and to encourage the betrayal of one faction by another

But in his suggestion of another course for the tyrant to take—the policy of not merely pretending but of actually trying to conduct himself like a just king—Aristotle seems to deviate from the spirit of Machiavelli s maxim that

the appearance of virtue is profitable so long as it does not interfere with doing whatever is expedient however vicious Yet even here Aristotle says that the tyrant must be careful to keep power enough to rule over his subjects whether they like him or not for if he once gives this up he gives up his tyranny

The best commentary on these recommendations seems to be indirectly expressed by their authors Both Aristotle and Machiavelli draw one striking conclusion from the history of those—call them princes or tyrants—who have tried to put such rules into practice Whether its collapse is due to the inherent weakness of might without right as Aristotle suggests or in Machiavelli s terms to the unforeseeable mishaps of fortune tyranny of all forms of government seems to be the shortest lived

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To find the passages cited use the numbers in heavy type which are the volume and page n mbers of the passages referred to For example in 4 Ho i r *Iliad* BK II [265 283] 12d the number 4 s the number of the volume in the set the number 12d ind cates that the pa sage is in section d of page 12

P GE SECTION When the text is printed in one column the letters a and b refer to the upper and lower halves of the page. Fo e mple in 53 J M *Psy h logy* 116a 119b the passage begins in the upper half of page 116 and ends in the lo er half of pag 119 When the text is pri ted in two columns the letters a and b refer to the upper and lo ver hal es of the left h ds de of the page the letters c and d to the upper and lower h lves of the right hand s de of the page F example in 7 PLATO *Symposium* 163b 164c the passag begins in the lo er half of the left hand side of page 163 and ends in the upper half of the right hand s de f pag 164

AUTHOR DIVISION One or mo e of the main divisions of a wo k (ch as PART BK CH s c) ar somet mes included in the reference line numbers in brackets are gi en in cer tain cases *e g Il d* BK I [265 83] 12d

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For add tional info mation c ncerning the styl of the references ee the Explanation of Reference Style f r gener l guidance in the use of *The Great Id as* consult the Preface

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6 THUCYDIDES *Peloponnesian War* BK VI 516b 517a 523b-c 524d 525d 533a c
7 PLATO *Republic* BK VIII 411d-413a BK IX, 416c 417b / *Statesman* 603d 604b / *Laws* BK III 675c 676b BK IV 681b 682c
9 ARISTOTLE *Politics* BK II CH 12 [1273b35 1274 22] 470c d BK III CH 7 [1279b4 10] 476d-477a CH 10 [1281 11 23] 478d-479a BK IV CH 4 [1292 4 37] 491b-d CH 6 [1293a1 10] 492c CH 14 [1298 29–34] 498d BK V CH 5 [1305 8–28] 506d 507a CH 8 [1308 14 24] 510b CH 9 [1309b14 1310a12] 511d 512b [1310a25–36] 512c CH 10 [1310 39–b18] 512d 513a [1312 40–b8] 514d 515a CH 11 [1313b 38 1314 1] 516c BK VI CH 4 [1319b 6–32] 523b
14 PLUTARCH *Agis* 648b d 649b
15 TACITUS *Histories* BK III 265a b
18 AUGUSTINE *City of God* BK II CH 21 162a
27 SHAKESPEARE *Coriolanus* ACT I SC I [1 22] 351a 353d ACT II SC I [1 106] 361a 362 ACT III SC I [140–161] 370d 371a ACT IV SC VI [74 156] 383a 384a
38 MONTESQUIEU *Spirit of Laws* BK III 10 BK VIII 51a 52c
38 ROUSSEAU *Social Contract* BK I I 411a b 419b
40 GIBBON *Decline and Fall* 14b
41 GIBBON *Decline and Fall* 73b c 94d
43 FEDERALIST NUMBER 1 30b NUMBER 8–9 45a 47c passim NUMBER 10 49c 53a passim NUMBER 22 84c d NUMBER 43 141d 142 NUMBER 48 156d 159a passim NUMBER 51 164a 165a NUMBER 58 181b 182a NUMBER 63 192c 193a NUMBER 78 232a d
43 MILL *Liberty* 268d 274a 298b 299a 302b c 309a b / *Representative Government* 330a 366c 389b passim esp 377b 380c 381d 406c d
44 BOSWELL *Johnson* 260b
46 HEGEL *Philosophy of Right* ADDITIONS 180 148b / *Philosophy of History* PART II 273d 274a 277d PART III 295d 296b 300 b PART IV 365 366b

3 The choice between tyranny or despotism and anarchy

6 HERODOTUS *History* BK I 23b 24
14 PLUTARCH *Solon* 68d 70d / *Pompey* 525a 526d / *Caesar* 588c 591d 598d 599a / *Cato the Younger* 638b 639a
15 TACITUS *Annals* BK I 1b-c BK III 51b-52 / *Histories* BK IV 290a d
23 HOBBES *Leviathan* PART II 104b d 112b-d PART V 273a b
35 LOCKE *Civil Government* CH II SECT 13 28 b CH VII SECT 90 93 44d 46a CH XI SECT 137 56d 57b CH XVIII SECT 203 210 72a 73c CH XIX SECT 224 229 76d 78a

38 R USSEAU *Inequality* 356b c 359b c / *Soc al C t ct* BK I 389b BK IV 433a-434b
43 FEDERALIST NUMB R 8-9 45a-47c passim NUM ER 16-20 66c 78b pa sim esp NUMB R 16 66c 68d NUM R 70 210c d
43 MILL *Representat ve Government* 344c d 350b 355b passim esp 351c d 367b c

The nature nd effects of despot sm

7 P TO *St tesma* 590c d 598b 604b
9 ARISTOTLE *Ethics* K VIII CH II [1161 II 2] 413b c / *P litics* K I CH 5 447d 448c K I CH 13 [1284 3 b34] 482a 483a CH 14 [28 7 b34] 483b 484a BK IV CH 10 [129 9-23] 495 b
15 TA ITU *Annals* BK III 51b
19 AQUINA *S mma Theologica* PART I Q 8 A 3 REP 430c 431d ART I II Q 17 A 7 ANS 690d 692a
35 L CKE *C il Government* CH III SECT 17 18 28d 29b CH IV 29d 30b CH VII SECT 85 43c d CH XV SECT 172 174 65b d
38 MONTESQUIEU *Sp r t f Laws* K II 4 8d 9 c BK I I 12a 13c BK I 15a c K V 26 30 BK VI 33d 35a 39d 40d K VIII 54a b 57b 58d BK IX 60a b K X 68b d BK XV 109a BK XVIII 128d BK XIX 137c 140c
38 ROUSS AU *Social C tract* BK I 387b d 391b
40 G BON *De l ne a d Fall* 50a b 91a 154b c
41 GIB ON *Decline and F ll* 81c d 320d 321b
42 K NT *Science of Right* 438a b 450c d
43 MILL *Liberty* 297 b / *R pr sentat e Govern m nt* 341d 344d 367b 382b
46 HEGEL *Ph los phy f Right* PART I par 270 89b par 286 96c d par 355 112d 113 A DITI N 80 148b / *Philosophy f H tory* INTRO 161a c P RT 213b 214d 222a-c 230a PAR II 285d 302a d

4a The r l tion of despotism to ty nny and monar hy the ben volence of d spots

6 THUCY I S *Pelop nn a W* K VI 523b 524d
7 PLATO *St te m n* 590 d 598b 604b / *Laws* K I 672d 674d BK 681b-d
9 AR TOTLE *Eth cs* BK VI I CH { 160b23 3] 413 CH I 413b d / *P litics* BK I CH 4 [8 7 34] 483b 484 CH 17 [128 b37 1 88a7] 486c K IV H 10 [1295 9- 3] 495a b BK V CH I [3 b 4 3] 513 CH [13 4 30-13 5b I] 517a 518c / *Athen Const tu t n* CH 15 559b c
14 P LT R H *The u* 9a d / *Romulus Th u* 30c d / *S lon* 75 76d / *P pl c la* 80d 82a / *Alex der* 540b d 576d passim
19 AQUIN S *S mma Theolog* PART I Q 81 A 3 RE 430c 431d
23 HOBB S *Levi tha* P RT 110b 111a
24 R B LAI *G gant and Pa t g uel* BK III 131b d 133b

35 LO K *C il Government* CH VII SECT 90-94 44d 46 CI VIII SECT 107 49b-d CH XIX S CT 231 239 78c 81b
36 S IFT *Gulliver* P RT II 74a 76b PART III 120a
38 MONTESQUIEU *Spirit of Laws* BK II 4a 7c 9a c K III 12a 13c BK IV 15a-c BK V 25d 26c 30a 31b BK V VI 32b 35 K VI 36a b 37a 38b 43c K VII 46a 47d-48a 50a b K VIII 56d 57c BK IX 60a 61a K XI 75a b 75d K XII 90b c BK XIII 97a b 98d 100b 102a c BK XV 109a BK XXV 211c d
38 ROUS AU *In qual ty* 357a c / *S cial Con tract* BK I 419b
40 GIBBON *Decline and Fall* 24b 32c 33a 40d 41d 50a 255b d 257a 338d 344a passim 389 390c
41 GIBBON *Decline and Fall* 39b 40b
43 M LL *Liberty* 267d 268c / *Representative Government* 339a 340d 341d 344d 348d 349a 351a 354b passim
46 HEGEL *Philosophy of Right* PART I I par 286 96c 97a

4b The comp rison of p ternal nd despot c dominion the just fic t on of absol te rule by the incapac ty of the ruled for self go ernment

5 SOPHO LES *Ant g* [640-676] 136d 137a
5 EURI IDES *Suppliants* [399-425] 261d 262a
6 HERODOTU *History* BK I 35 d BK III 107c 108c 120b c
7 PLATO *St tesman* 598b 604b / *Laws* BK III 670 671a K IV 679 680d
9 AR TOTLE *Eth cs* K V C I 6 [134b8 8] 382b K VI I CH I [60b23-32] 413a CH II 413b d / *Polit s* BK I CH 5 447d-448c CH 8 [1256 2 25] 450c CH 2 13 453d 455a BK III CH 13 [1284 3 b34] 482a 483a BK VI CH 2 [1324b 3-4] 528d 529a
15 TA US *Annal* K III 51b / *H stories* BK I 191d 192 193c 194a BK IV 290a d
18 AU UST N *C ty f God* BK II CH 21 161b-162d BK XIX CH I 524c 525a
23 HOB ES *Lev ath n* PART I 104b-d 109b 112d A T IV 273a-c
32 MIL ON *Sam on Ago istes* [1 10- 060] 361b-362b
35 LOCKE *C l Government* CH VI 36a-42a pas m C VI E T 84 86 43c-44 C I V S T 05 110 48c 50d CH XV SECT 70 64d 65a CT 72 174 65b d
37 FIELD NG *T m J nes* 100b 102a 359b 362c
38 MONT SQUI U *Spirit f Laws* BK 3b BK V 22d 23a BK VIII 57b BK XV 110a 111c BK XVI 116a 120 K XVI 122a 123b 124c d K XVIII 128d K XX 189b
38 ROU E U *I qual ty* 324a b 357a b / *Pol t c l E omy* 367 368c passim / *Social C ntra t* BK 402d 403a BK I 414c d
40 GIB ON *D cline a d Fall* 32b c 513b-c

(4 *The nature and effects of despotism 4b The comparison of paternal and despotic dominion, the justification of absolute rule by the incapacity of the ruled for self government*)

42 KANT *Science of Right* 404d 420b 422d 436d-437c 445c 446a
43 FEDERALIST NUMBER 9 47b c NUMBER 55 174c d
43 MILL *Liberty* 271d 272a 317c 318a / *Representative Government* 329 339a 341c 344c 351c 354b 436b 437a
46 HEGEL *Philosophy of Right* PART I par 93 36a b / *Philosophy of History* INTRO 174a c 198b 199 PART III 300c-301c
52 DOSTOEVSKY *Brothers Karamazov* BK V 127b 137c

5 The contrast between despotic and constitutional government: government by men and government by laws

5 AESCHYLUS *Eumenides* [681 710] 88b c
5 SOPHOCLES *Oedipus at Colonus* [904-931] 122d 123a
5 EURIPIDES *Suppliants* [399-462] 261d 262b
5 ARISTOPHANES *Wasps* [463 507] 512d 513c
6 HERODOTUS *History* BK III 107c 108c BK V 175b BK VII 233a d
6 THUCYDIDES *Peloponnesian War* BK I 368c d BK II 425a c 438a b
7 PLATO *Statesman* 598b 604b / *Laws* BK III 667c 676b BK IV 681b 682c BK VIII 733d 734a BK IX 754a b / *Seventh Letter* 805d 807b
9 ARISTOTLE *Ethics* BK V CH 6 [1134 4 b8] 38 a b BK X CH 9 [1180a14 24] 434d 435a / *Politics* BK I CH I [1252 3 17] 445a b CH 5 [1254 34 b9] 448a CH 7 [1255b16-20] 449b CH 12 453d 454a BK II CH 10 [1272 35 b10] 468d 469a BK III CH 6 [1278 30-1279 22] 476a c CH 10 [1281 9-39] 479a CH 11 [1282b 1 13] 480b c CH 15 17 484b 487a BK IV CH 6 492b-493a passim CH 8 [1293b22 27] 493c CH 10 [1295 9 23] 495a b
14 PLUTARCH *Caesar* 591d / *Cato the Younger* 638b 639a
15 TACITUS *Annals* BK I 1a 2b BK III 51b c 61c 62a
20 AQUINAS *Summa Theologica* PART I II Q 95 A I REP 2 226c 227 Q 96 A 5 REP 3 233d 234d
23 HOBBES *Leviathan* PART II 114b 115 131d 132a 149d 150a
35 LOCKE *Civil Government* CH IV SECT 21 29d CH VII SECT 87-94 44a 46 CH XI 55b 58b passim CH XVI 171a 73c
37 FIELDING *Tom Jones* 268c 269b
38 MONTESQUIEU *Spirit of Laws* BK I 4a 8b-d BK III 12a d BK V 25d 26c 30a c BK VI 33a 35a 36a 37a BK VII 54a b BK XIX 137c d BK XXV 211c d BK XXVI 223c d
38 ROUSSEAU *Inequality* 323d 324a 357b-c 358b d 361c 362a / *Political Economy* 370b-371a / *Social Contract* BK I 387b d 391b BK II 400a BK III 408c 419a c BK IV 433 434b
40 GIBBON *Decline and Fall* 24b d 28b passim 51c d 154a c 342a c 592a
41 GIBBON *Decline and Fall* 73d 75a 96d 11a
42 KANT *Science of Right* 450b-d
43 DECLARATION OF INDEPENDENCE 1a 3b passim
43 FEDERALIST NUMBER 47 153c 154d NUMBER 55 174c d NUMBER 57 177d 178a NUMBER 58 230d 232a
43 MILL *Liberty* 267d 268b 274b d [fn 1] / *Representative Government* 338d 341d 341d 350a esp 346a b
46 HEGEL *Philosophy of Right* PART III par 2 S 92c 93a par 286 96c 97a ADDITIONS 17 146b c / *Philosophy of History* INTRO 19 b 199c PART I 208b c PART II 262a c PART III 301c 302d PART IV 342a d
54 FREUD *Civilization and Its Discontents* 780b-d

5a Despotic and constitutional government with respect to political liberty and equality: the rights of the governed

5 SOPHOCLES *Oedipus at Colonus* [907-931] 122d 123a
5 EURIPIDES *Suppliants* [429-456] 262a b
6 HERODOTUS *History* BK I 107c d BK VII 233c d
7 PLATO *Statesman* 598b 604b / *Laws* BK III 672d 674d BK IV 681b 682b
9 ARISTOTLE *Ethics* BK V CH 6 [1134 b1] 382a c passim BK VIII CH 11 [1161 30-b10] 413c d / *Politics* BK I CH 7 [1255b16-20] 449b BK III CH 6 [1278b30-1279 2] 476a c CH 16-17 485b 487a BK IV CH 4 [1292 4 37] 491b-d CH 10 [1295a9-23] 495a b BK V CH 9 [1310 25-36] 512c
12 AURELIUS *Meditations* BK I SECT 14 254b-c
15 TACITUS *Annals* BK III 61c 62a / *Histories* BK I 189a b BK IV 290a d
19 AQUINAS *Summa Theologica* PART I Q 81 A 3 REP 2 430c 431d PART I II Q 17 A ANS 690d 692a
25 MONTAIGNE *Essays* 383c d
32 MILTON *Paradise Lost* BK V [769-799] 192a b
35 LOCKE *Toleration* 19a d / *Civil Government* CH IV 29d 30b CH VI SECT 61-63 38a c CH VII SECT 87-94 44a 46c CH IX SECT 131 54d CH XI SECT 135 139 55d 58a CH XV SECT 171-CH XVI SECT 196 65 70c
38 MONTESQUIEU *Spirit of Laws* BK III 12b-13c BK VI 33a 35a BK XI 85a c BK XV 109a b 112c d BK XIX 142a
38 ROUSSEAU *Inequality* 323d 324a 356b-358b 359b-d 361c-362 / *Political Economy* 370d 371a 375b c / *Social Contract* BK I 387b d 391b BK V 438c
40 GIBBON *Decline and Fall* 14a c 33a 34a c 91a 522c 524a

41 GIBBON *Decline and Fall* 81c 82a 96a d 161c 162a
42 KANT *Science of Right* 436d 451b-c
43 DECLARATION OF INDEPENDENCE 1a 3b passim
43 FEDERALIST NUMBER 8-9 45a-47c passim NUMBER 84 251b-253d
43 MILL *Liberty* 267d 268c 274b 275a / *Representative Government* 339d 340c 341d 344d 348c 350
46 HEGEL *Philosophy of Right* PART III par 215 71c d par 286 96c 97a par 297 99b ADDITIONS 180 148b / *Philosophy of History* INTRO 161a c PART I 213b-214d 230a c PART II 271d 272d PART III 301c 302a PART V 342b d

5b Despotic and constitutional government with respect to juridical defenses against misgovernment or redress for grievances through due process of law

35 LOCKE *Civil Government* CH VI SECT 8-94 44a 46c CH XII SECT 143 58c d CH XVIII SECT 20 207 71d 73a
38 MONTESQUIEU *Spirit of Laws* BK VI 33 35a 36 b 37 c BK XI 69d 75a passim BK XII 85a c
38 ROUSSEAU *Social Contract* BK III 407d 408a 424 d BK I 432b 433a
41 GIBBON *Decline and Fall* 93a c 94c 95c 96c d 173c d
42 KANT *Science of Right* 436d
43 DECLARATION OF INDEPENDENCE [52-55] 2a [66-67] [70-71] 2b [95 1 5] 3
43 CONSTITUTION OF THE U S PREAMBLE 11 c ARTICLE I SECT 6 [143 15] 12 d SECT 9 [67 27] 13d SECT 9 [289]-SECT 10 [303] 14a ARTICLE II SECT 4 ARTICLE I CT I [463 468] 15c ARTICLE III SECT 3 [5 7-511] 16a AMENDMENTS I-X 17a d XIV SECT I 18
43 FEDERALIST NUMBER 44 144d 145a NUMBER 47-50 153c 162 NUMBER 51 164 165a NUMBER 53 167b-168b NUMBER 57 177d 178a NUMBER 78 229d 233c passim NUMBER 83 244b 251a passim esp 245d 246b NUMBER 84 251b 253d
43 MILL *Liberty* 267d 268b 269a c / *Representative Government* 401d 402b
44 BOSWELL *Johnson* 195c d
46 HEGEL *Philosophy of Right* PART II par 86 96c 97a

5c The location of sovereignty in despotic and constitutional government the sovereign person the sovereign office the sovereign people

OLD TESTAMENT *Judges* 1,24 / *I Samuel* 8 4-2 —(D) *I Kings* 8 4 20
5 EURIPIDES *Suppliants* [429-456] 262 b / *Andromache* [464 49] 319b-c
6 HERODOTUS *History* BK 107c 108c
7 PLATO *Laws* BK I 672c 676c
9 ARISTOTLE *Politics* BK I CH [1261a23 b6] 456a b BK III CH I [1275a22 b 1] 472a c CH 10 [1281a29]-CH 11 [1282b14] 479a-480c CH 7 486c-487a
14 PLUTARCH *Tiberius Gracchus* 678b d
20 AQUINAS *Summa Theologica* PART I II Q 90 A 3 207a c Q 96 A 5 REP 3 233d 234d Q 105 A 1 ANS 307d 309d
23 HOBBES *Leviathan* PART I 97c d PART I 100 101b 104d 106d
35 LOCKE *Civil Government* CH VII SECT 87-94 44a-46c CH IX SECT 127-CH X SECT 132 54a 55b CH XIV 62b 64c passim CH XV SECT 171-174 65a-d
38 MONTESQUIEU *Spirit of Laws* BK II 4a 7c 9a,c BK V 30 c BK XI 69d 75a
38 ROUSSEAU *Social Contract* BK II 395a 396a BK III 408b c 412c 413a 419 c 423a c 424a d
40 GIBBON *Decline and Fall* 24b d 28b esp 25 26d 27c 51a d 100d 241b
41 GIBBON *Decline and Fall* 74b-d 320d 321a
42 KANT *Science of Right* 436c 437c d 439a 450 c 451c 452a
43 DECLARATION OF INDEPENDENCE 1a 3b esp [43 47] 2a
43 CONSTITUTION OF THE U S PREAMBLE 11a c AMENDMENTS IX X 17d
43 FEDERALIST NUMBER 2 84d 85a NUMBER 33 108b c NUMBER 39 125c d NUMBER 46 150b c NUMBER 49 159c NUMBER 51 164a 165a NUMBER 53 167d 168b
43 MILL *Liberty* 267d 269 / *Representative Government* 341d 350a passim 355b-356b
46 HEGEL *Philosophy of Right* PART I par 275 92a b p 279 93a 94d ADDITION 167 145c / *Philosophy of History* PART II 272b-273a PART II 300a 301 PART V 342b-d 355c d 365 366b
51 TOLSTOY *War and Peace* EPILOGUE II 680b-684a

5d The analogue of despotic and constitutional rule in the relation of the powers of the soul the tyranny of the passions

7 PLATO *Phaedrus* 120b-c / *Republic* BK I 296b c BK IX 416a-418c 419b-421a
9 ARISTOTLE *Ethics* BK I CH 13 [27 1 3 3] 347d 348 / *Politics* BK I 5 [1254 33-b26] 448a b CH 3 [60a4 8] 454c
12 EPICTETUS *Discourses* BK IV CH I 213d 218a c CH 5 229a b
15 TACITUS *Annals* BK VI 87b
17 PLOTINUS *Sixth Ennead* TR IV CH 15 304c d TR VIII 343a b
18 AUGUSTINE *City of God* BK V CH 3 190c BK X II 386b BK X X CH 15 521a CH 2 524c d / *Christian Doctrine* BK CH 24 630c 631a
19 AQUINAS *Summa Theologica* PART Q 81 A 3 REP 2 430-431d PART I Q 9 A REP 3 653d 659 Q 7 A 7 690d 692a

(5 *The contrast between despotic and constitutional government: government by men and government by laws 5d The analogues of despotic and constitutional rule in the relation of the powers of the soul: the tyranny of the passions*)

25 Montaigne *Essays* 184b-d
27 Shakespeare *Measure for Measure*, act iv, sc ii [82-88] 194b / *Macbeth*, act iv, sc iii [32-114] 303d-304c
32 Milton *Paradise Lost*, bk xii [79-101] 321a-b esp [90-95] 321a
35 Locke *Human Understanding*, bk ii, ch xxi, sect 54 192b-c
38 Rousseau *Social Contract*, bk i 393c
42 Kant *Judgement* 586d-587a
46 Hegel *Philosophy of History*, part i, 233b-c; part iv, 346a-c
54 Freud *Ego and Id* 715b; 715d-716a / *New Introductory Lectures* 838d-839b

6 Imperial rule as despotic and as tyrannical or benevolent: the government of conquered peoples or colonies

Old Testament *Exodus* 1:8-14; 5 / *Judges* 6:1-6
Apocrypha *I Maccabees* 1:41-64—(D) OT *I Machabees* 1:43-67 / *II Maccabees* 5:21-7:42—(D) OT *II Machabees* 5:21-7:42
6 Herodotus *History*, bk i, 30b-31a; 35c-36a; 38b-c; bk v, 184a-d; bk vi, 189d-191b,c; bk vii, 222b-c; 225d-226b
6 Thucydides *Peloponnesian War*, bk i, 368b-370d passim; 379b-c; bk ii, 403b-404a; bk ii, 424d-429b; bk v, 504c-507c; bk vi, 529b-533a
9 Aristotle *Politics*, bk i, ch 8 [1256^{b}22-25] 450c; bk iii, ch 13 [1284^{a}26-^{b}2] 482b-c; bk vii, ch 2 [1324^{b}3-41] 528d-529a; ch 14 [1333^{b}38-1334^{a}2] 538d
14 Plutarch *Lucullus* 409b-410b
15 Tacitus *Annals*, bk i, 17d; bk iv, 76a; 82d-83a; bk xii, 117c-d; bk xiv, 149a-b / *Histories*, bk iv, 286c-287; 290a-d
18 Augustine *City of God*, bk xix, ch 15 521a-c; ch 21 524a-525b
23 Machiavelli *Prince*, ch ii-v 3c-8c
23 Hobbes *Leviathan*, part i, 101b-111a; conclusion 280b-281a
25 Montaigne *Essays* 440b-443d
35 Locke *Toleration* 13c-d / *Civil Government*, ch xv 65d-70c
36 Swift *Gulliver*, part i, 24b-25a; part iv, 182b-183a
38 Montesquieu *Spirit of Laws*, bk viii, 56d-57c; bk x, 62b-63a; bk xi, 83c-84c; bk xiii, 96d-97; bk xv, 110a-d
38 Rousseau *Inequality* 359b / *Social Contract*, bk i 389d-390d
40 Gibbon *Decline and Fall* 14d-15; 18a; 23c-d; 33d-34c; 147a-b; 420b-d; 522c-523a,c; 550d-551b; 608b-d; 609a; 620a; 632d-633a
41 Gibbon *Decline and Fall* 51a; 53b passim; 216c-217a; 307a-c; 420c; 505a-c
42 Kant *Science of Right* 413d; 454d-455a
43 Declaration of Independence 1a-3b
43 Mill *Representative Government* 353c-436b; 437a
44 Boswell *Johnson* 179c
46 Hegel *Philosophy of Right*, part iii, par 351 112a-b; additions, 172 146c-d / *Philosophy of History*, part iii, 298a-299c; 301c-302a
50 Marx *Capital* 372c-374a

7 The ways of tyrants or despots to attain and maintain power

Old Testament *Daniel* 3:1-12
Apocrypha *I Maccabees* 1:41-64; 10:22-46—(D) OT *I Machabees* 1:43-67; 10:22-46
5 Aeschylus *Prometheus Bound* [196-243] 42b-c
5 Aristophanes *Wasps* [650-724] 515c-516d
6 Herodotus *History*, bk i, 12b-14a; 21b-23a; 24b-25c; 29b; 35c-36a; bk iii, 99a-c; 102d-106c; 114c-115a; 123c; bk iv, 148a-b; bk v, 164a-c; 166c-d; 172c-174b; 179c-180a; bk vi, 187b-c; 191b; 192c-d; bk vii, 243b-c
6 Thucydides *Peloponnesian War*, bk i, 380d-382b; bk iii, 425a-426d; bk vi, 524c-d; bk viii, 579c-590c
7 Plato *Gorgias* 264c-265a / *Republic*, bk viii, 411d-415c / *Seventh Letter* 803b-811b-813d
9 Aristotle *Politics*, bk iii, ch 13 [1284^{a}3-^{b}3] 482a-c; bk v, ch 10 [1310^{a}39-1311^{a}28] 512d-513c; [1312^{b}9-1313^{a}17] 515a-d; ch 11 [1313^{a}34]-ch 12 [1315^{b}39] 516a-518d; bk vi, ch 4 [1319^{b}26-32] 523b / *Rhetoric*, bk i, ch 2 [1357^{b}30-1358^{a}1] 597c-d
12 Epictetus *Discourses*, bk iv, ch 13 244a-b
14 Plutarch *Romulus* 27c-28d / *Solon* 75c-76d / *Poplicola* 77a-86a,c passim / *Camillus* 117c-121a,c / *Coriolanus* 176b-184c / *Caius Marius* 344c-354a,c / *Sulla* 382a-387a,c / *Agesilaus* 482a-484a; 489b-c; 495a-b / *Pompey* 521b / *Caesar* 580b / *Cato the Younger* 636c-d / *Agis* 648b-d; 656d / *Tiberius Gracchus* 671b-d; 681a-c / *Marcus Brutus* 809b-811a esp 810b
15 Tacitus *Annals*, bk i, 1b-2a; 2c-4d; 14a-b; 21b-22b; 23; bk ii, 29d-30d; 31d-32a; 32d-34; 35c-d; 38c-d; 40a-b; 42b; bk iii, 58d-59a; bk iv, 68b-69c; 82a-b; bk xi, 155b-156a; bk xv, 168a-c; 170c-176b / *Histories*, bk i, 195a-196c; 198c-199c; 200c-d; 208b-c; 209d-210b
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35 LO KE *Ci l G ver ment* CH III S CT 17-8 28d 29b CH XIV SECT 166-168 63d 64c H XVI SECT 176 66 b SECT 190-196 69b 70c pa im CH XVI SECT 202 71d 72a S CT 2 0 73b H XIX 73d 81d esp S CT 223 228 76c 78a
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CROSS REFERENCES

For Other discussions bearing on the nature and injustice of tyranny *see* GOVERNMENT 1d-1f JUSTICE 9c LAW 7d SLAVERY 6a

The relation of tyranny to other forms of government *see* ARISTOCRACY 2e DEMOCRACY 2a MONARCHY 4b OLIGARCHY 3a

To The distinction between tyranny and despotism in terms of the distinction between slavery and subjection *see* SLAVERY 6a–6b and for the relation of despotism to absolute monarchy *see* MONARCHY 4a–4b 4e(1)

Other statements of the justification of benevolent despotism or of absolute monarchy relative to certain conditions *see* DEMOCRACY 4d GOVERNMENT 7c MONARCHY 4e(2) SLAVERY 6c and for comparisons of domestic and political government which are relevant to this justification of despotism *see* FAMILY 2a MONARCHY 4a 4e(1) STATE 1b

The distinction between despotism and constitutional government in terms of the distinction between subjection and citizenship *see* CITIZEN 2b JUSTICE 9d LAW 7b LIBERTY 1d SLAVERY 6b

The distinction between government by men and government by law *see* CONSTITUTION 1 LAW 7a MONARCHY 1a(1) and for the political significance of this distinction *see* CONSTITUTION 7b DEMOCRACY 4b GOVERNMENT 1g(1)–1g(3) LAW 7b LIBERTY 1d MONARCHY 4e(3)

The analogies of despotic and constitutional rule in the relations of reason and the passions *see* LIBERTY 3a–3b SLAVERY 7

The analogies in the economic order of political tyranny and despotism *see* JUSTICE 8c–8c(1) LABOR 5a–5d 7f SLAVERY 4a–4c

Other discussions of imperialism *see* DEMOCRACY 7b GOVERNMENT 5b MONARCHY 5–5b REVOLUTION 7 SLAVERY 6d STATE 10b WAR AND PEACE 6a

The struggle for power and for liberty as between tyrants or despots and the people they oppress *see* LABOR 7c–7c(3) LIBERTY 6b–6c OLIGARCHY 5c PROGRESS 3b REVOLUTION 3a–3b 3c(3) 4a 5b SLAVERY 3c

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World* but relevant to the idea and topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collection
II Works by authors not represented in this collection

For the date place and other facts concerning the publication of the works cited consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*

I

MACHIAVELLI *The Discourses*
—— *Castruccio Castracani*
MILTON *The Readie and Easie Way to Establish a Free Commonwealth*
DOSTOEVSKY *The Possessed*

II

MARSILIUS OF PADUA *Defensor Pacis*
LUTHER *Whether Soldiers Too Can Be Saved*
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RACINE *Britannicus*
VOLTAIRE "Tyranny" "Tyrant" in *A Philosophical Dictionary*
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SCHILLER *William Tell*
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MAZZINI *From the Council to God*
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BRYCE *Address on Colonial Policy*
T HARDY *The Dynasts*
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TROTSKY *The Defense of Terrorism*
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MARRIOTT *Dictatorship and Democracy*
KOHN *Revolutions and Dictatorships*
MERRIAM *The New Democracy and the New Despotism*
STRAUSS *On Tyranny*

Chapter 96 UNIVERSAL AND PARTICULAR

INTRODUCTION

ON such speculative problems as the exist ence of God the immortality of the soul the infinity of time and space or the limit of human knowledge the conversation of philosophers seems to make contact with the discourse of scientists the language of poets and the speech of ordinary men The philos ophers usually begin at least by propounding questions which correspond to those asked by men who do not profess to be philosophers But throughout the tradition of western thought the problem of the universal unlike these others seems to have the character of a professional secret

The various solutions of the problem of the universal are so many esoteric doctrines each with its own sectarian name The initiated can distinguish themselves from the novices by their proficiency in this area and the outsider who overhears the discussion of professional may be completely left behind wondering as much about how the question arose as about the meaning of the conflicting answers

No genuine philosophical problem it seems reasonable to suppose can be so remote from questions intelligible to common sense If it is not just a specious riddle to amuse the experts the problem of the universal despite its tech nical appearance should raise issues from wh ch in some form or other no one can escape Wh th er or not this is so can be tested by consider ng the various ways in which the problem occurs in other chapters under different guises and in different contexts

In the chapter on SAME AND OTHER we find the quest on how two individu ls can be the sa ne in some particular respect—how n spite of their separate existence they can share in the possession of a common nature or attribute Anyone who classifies things or tries to make definitions may be led to wonder whether clas sifications are entirely verbal and definitions fictions of the mind or whether things them selves belong together in some real community based upon an inherent sameness or similarity

In the chapter on ONE AND MANY the ques tion takes the form of asking how two or more things can be one in any way Again both science and common sense seem able to deal with an infinite number of individuals by apply ing a single name to them or apprehending them all under a single concept or notion But it may be asked what justifies the denomination of many things by one name What unity in the things verifies the tendency of thought to uni fy them conceptually? Does a real unity exist in things by virtue of their being somehow one as well as many or as a result of the many somehow participating in a one which exists separately from them?

In the chapters on DEFINITION and SIGN AND SYMBOL the same questions are at lea t implicit In connection with the object of definition one issue is whether what Aristotle calls the formu lable essence exists as the common nature of many individuals or whether as Locke sug gests definitions formulate only the nominal not the real essences of things As that and re lated issues are faced anyone who acknowledges the familiar distinction between proper and common names may become involved in ques tion ng what common or general names signify and how they get the meanings with which they are used in everyday d scourse

The problem of the sameness of things dis tinct from one another the problem of the one *in* the many or the one *and* the many the prob lem of essences and common names are other statements of the problem of the universal and the particular Attention to the words them selves confirms th s The word *universal* con notes a unity—the one as opposed to the many

the common as opposed to the unique or special The word *particular* connotes participation—the part as opposed to the whole the member as opposed to the class As the reference already made to essence and individual indicates these are not the only pairs of terms which somehow correspond in significance to universal and particular but others like model and imitation form and matter abstract and concrete are more obscure in meaning The discussion of universal and particular throws light on them rather than gains clarity from them

THE READER OF THE great books can witness the origin of the problem of the universal and particular as it occurs in a conversation not between technical philosophers but between Socrates and his friends In the *Meno* Socrates and Meno get into a discussion of how virtue is acquired Socrates thinks it is necessary to inquire first what virtue is Meno responds by enumerating different virtues but Socrates is not satisfied He wants a definition which will cover all the virtues Even if Meno could say what justice or temperance is that would not do for each of these is as Socrates says *a* virtue not *virtue*—a particular virtue or a part of virtue not the whole of it

In searching after one virtue Socrates tells Meno we have found many but we have been unable to find the common virtue which runs through them all To help Meno who claims he is not able to follow Socrates in his attempt to get at one common notion of virtue Socrates shifts the discussion to colors and figures He warns Meno that color cannot be defined by naming colors and that even if he could define a square a circle and all other figures he would not be saying what *figure* is To proceed in this way is to be landed in particulars

Tell me then Socrates says since you call them by a common name and say that they are all figures even when opposed to one another what is that common nature which you designate as figure?

If Meno were to reply I do not know what you want not much further explanation could be given To someone who remained perplexed at this point we could only say Socrates suggests Do you not understand that we are looking for the same in the many? Or put in another form we might ask he says What is that [one in many] which you call figure and which includes not only the round and straight figures but all?

Thus stated the problem of the universal seems inescapable—a problem for everyone not just for philosophers But the philosophers complicate the problem almost as soon as it is stated Giving his version of the history of philosophy Aristotle offers an explanation of how the problem shifted to another level Socrates he writes was busying himself about ethical matters and seeking the universal in these ethical matters [he] fixed thought for the first time on definitions Plato accepted his teaching but held that the problem applied not to sensible things but to entities of another kind—for this reason that the common definition could not be a definition of any sensible thing as they were always changing Things of this other sort he called Ideas and sensible things he said were all named after these and in virtue of a relation to these for the many existed by participation in the Ideas that have the same name as they

It is at this point according to Aristotle that the great philosophical controversy begins Whereas the thinkers of old ranked particular things as substances *e g* fire and earth not what is common to both body the Platonists or idealists— the thinkers of the present day — tend to rank universal as substances for genera are universal Aristotle repeatedly tries to distinguish between the Socratic inquiry and what he regards as the Platonic doctrine—the theory of Ideas The first to raise the problem of universal definition Socrates he writes did not make the universals or the definitions exist apart they however —the Platonists— gave them separate existence and this was the kind of thing they called Ideas

As between Socrates and his disciple Aristotle does not hesitate to take sides Socrates gave the impulse to this theory of ideas but he did not *separate* universals from individuals and in not separating them Aristotle adds he thought rightly The issue between Aristotle and his own teacher Plato cannot how

ever be stated by so simple an affirmation and denial

On Aristotle s side it involves the fundamental principles of his metaphysics especially his doctrine of substance as well as his theory of what and how the intellect knows as contrasted with the perceptions of the senses On Plato s side it involves many questions concerning the intelligible and the sensible being and becoming the one and the many—questions the Aristotelian answers to which would not satisfy Plato

Wherever the truth lies Aristotle recognizes that on this issue perhaps more than on any other he is most sharply opposed to Plato It is the one matter wherein he feels a conflict between devotion to his teacher and to the truth as he sees it The consideration of the universal good he declares in the *Ethics* is made difficult by the fact that the Forms have been introduced by friends of our own but while both are dear *piety requires us to honor* truth above our friends

THE HISTORIANS OF PHILOSOPHY beginning with Aristotle attribute one solution of the problem of universals to Plato That solution comes to be called realism because it affirms the independent reality of universals as separately existing Ideas or Forms But all the commentators do not like Aristotle dissent from Plato s solution In our own time for example Bertrand Russell treating of the world of universals in the *Problems of Philosophy* says the problem with which we are now concerned is a very old one since it was brought into philosophy by Plato Plato s theory of ideas is an attempt to solve this very problem and in my opinion it is one of the most successful attempts hitherto made The theory to be advocated in what follows is largely Plato s with merely such modifications as time has shown to be necessary

For one thing Russell thinks the word idea has acquired in the course of time many associations which are quite misleading when applied to Plato s ideas We shall therefore he writes use the word universal instead of the word idea to describe what Plato meant We speak of what ver s g ven in sensation as a *particular* by opposition to this a *universal* will be anything which may be shared by many particulars Broadly speaking proper names stand for particulars while other substantives adjectives prepositions and verbs stand for universals

Russell here calls attention to another point which he thinks has too seldom been observed *namely that universals are not exclusively signified* by common nouns and adjectives but that in addition there are relational universals signified by prepositions and verbs This sort of universal according to him most readily shows that universals have being apart from particulars It can also be shown he argues that their being is not merely mental that whatever being belongs to them is independent of their being thought of or in any way apprehended by minds

If the word existence implies definite location in time and space then Russell concludes in the sense in which thoughts and *feelings minds and physical objects exist* universals do not exist We must say instead that they *subsist* or *have being* where being is opposed to existence as being timeless The world of universals therefore may also be described as the world of being The world of being is unchangeable The world of existence is fleeting According to our temperaments we shall prefer the contemplation of the one or the other The one we do not prefer will probably seem to us a pale shadow of the one we prefer and hardly worthy to be regarded as in any sense real But the truth is that both have the same claim on our impartial attention both are real and both are important to the metaphysician Indeed no sooner have we distinguished the two worlds than it becomes necessary to consider their relations

IT IS THIS CONSIDERATION which seems to be for Plato *the* problem of the universal—the central difficulty in the theory of Ideas or separate Forms As indicated in the chapters on FORM and IDEA the separation of the two worlds—the sensible world of becoming and the intelligible world of being—always calls for some explanation of their resemblance

Socrates sometimes refers to the doctrine of Ideas as if its truth could be assumed and sometimes argues the necessity of a realm of immu

table and intelligible being as the object of thought comparable to sensible changing things as the object of perception In the *Phaedo* for example he gets Cebes to admit that the ideas which in the dialectical process we define as essences or true existences are not subject to change but that they are always what they are having the same simple self existent and unchanging forms In contrast to absolute beauty or goodness the many beautiful or good things are always in a state of change These Socrates says you can touch and see and perceive with the senses but the unchanging things you can only perceive with the mind Let us suppose then he adds that there are two *sorts of existences—one seen the other unseen*

Later in the same dialogue Socrates repeats the assumption that there is an absolute beauty and goodness and greatness and the like No other assumption seems to him to provide as satisfactory an explanation of how particular things can be beautiful or good or have any other characteristics Nothing makes a thing beautiful he declares but the presence and participation of beauty in whatever way or manner obtained for as to the manner I am uncertain but I stoutly contend that by beauty all beautiful things become beautiful

In later Platonic dialogues the question of the manner comes to the fore Though the Eleatic Stranger in the *Sophist* refers to the endless conflict raging between the materialists and the idealists concerning the existence of the unseen world of ideas he himself seems to be doubtful only on the point of how the changing things of sense participate in the immutable forms One answer is suggested in the *Timaeus* According to the story of creation which Timaeus tells the artificer of the world made its sensible particulars copy an eternal pattern When many things seem to be of one nature or to share the same quality they are so by virtue of imitating the eternal forms which are not only absolute essences in themselves but are also the models for created or generated things

But in the *Parmenides* Socrates seems unable to defend the view that the ideas are as it were patterns fixed in nature and other things are like them and resemblances of them—for what is meant by the participation of other things in the ideas is really assimilation to them Nor can he meet other objections which Parmenides raises such as the difficulty of two or more individuals participating in one idea for if the idea is wholly in one individual it cannot be in another and if each of the many partake of the idea only in part then the idea cannot be one and indivisible In what way Socrates Parmenides asks will all things participate in ideas if they are unable to participate in them as parts or wholes?

In the course of the discussion Parmenides rebukes Socrates for being squeamish about positing absolute essences for such things as hair mud dirt or anything else which is vile and paltry as well as for thin s which are beautiful and good But his main intention seems to be to leave Socrates with an unresolved dilemma On the one hand the difficulties with the theory of Ideas make the denial of their separate existence reasonable on the other the denial of their existence seems to make thought and reasoning impossible because it deprives the mind of its proper objects

Some of Aristotle s arguments against the separate existence of universals repeat the objections raised by Parmenides to which no answer is given in the dialogues of Plato If it were not for the fact that Aristotle attributes to Plato himself the theory he criticizes the dialogues would leave us in some doubt as to whether it is Plato or his followers the Platonists who hold that theory But whether or not Aristotle s criticisms apply to Plato—and even if they involve some misunderstanding of his doctrine—the objections Aristotle raises help define his own position

To say that the Forms are patterns and that other things share in them Aristotle writes is to use empty words and poetical metaphors In his view the most paradoxical thing of all is the statement that there are certain thin s besides those in the material universe and that these are the same as sensible things except that they are eternal while the latter are perishable To posit the separate being of the forms of things seems to him a useless multiplication of existences To say that there must be Ideas of all things that are spoken of universally is to make substances of ideas

Those who say the Forms exist would be right Anstotle concedes *if* they are sub stances He does not think it is impossible to establish the existence of imperishable and in sensible substances but such substances if they exist would not stand in relation to sensible substances as universal to particular or as one to many His objection to the theory of Ideas is that in speaking of absolute beauty or beauty itself, of the idea Man or man itself the Platon ists do no more than add words like absolute or itself' to the names of sensible things and posit the existence of these absolutes or uni versals over and above the existence of the sensible particulars having the same name

Anstotle s own position seems to be that only individual substances exist whether they are sensible or intelligible perishable or eternal and that no universal can be a substance or exist separately in and of itself He does not thereby deny the reality of the universal On the contrary he holds that without the uni versal it is not possible to get knowledge *i e* scientific knowledge in distinction from mere sense perception All knowledge is of the universal and of the such he writes yet in adding that substance is not a universal but is rather a this Anstotle indicates what is for him the central problem of the universal

Anstotle s theory that the mind abstracts universal concepts from the particulars of sense experience and that such concepts are the terms of the universal propo itions constituting scien tific knowledge l aves a question concerning the object of science If science is kno vledge of real existence not of our own concepts and if only individual things really exist then how can the object of science be the universal not the ind vidual? What is the object apprehended by the universal concept man or horse?

Anstotle s answer seems to be that if the un versal term man can be truly predicated of an indefinite number of indiv duals it must signify something common to them all The common nature or properties shared by a num ber of individuals cannot be actually un versal hov ever since in Anstotle s opinion whatever exists in the individual—the form as well as the matter of the concrete substance—is itself indi vidual He finds it necessary to say therefore that the universal exists potentially not actual ly whenever a number of individuals have something in common

The form which constitutes human nature for example is an individual form in Socrates and Callias but it has the potentiality of being universal insofar as it is capable of being sepa rated from the individual matter of these t vo men by the abstractive power of the mind When the abstraction takes place and results in the universal concept man the form thus re ceived in the mind becomes a tually universal and enables the mind to apprehend the nature common to all individual men

ARISTOTLE S DOCTRINE THAT the universal exists potentially in individual things and actually in the abstract concepts of the mind later comes to be called moderate realism in contrast to the extreme realism of the position which as serts the actual subsistence of universals out side of minds as well as apart from individual things It affirms that the universal has what Russell calls extra mental reality even though it severely qualifies the real being of the uni versal by saying it is neither actual nor sub sistent

As Anstotle denies unqualified reality to universals later philosophers deny that they have any reality at all Those who are some times called conceptualists admit the exist ence of universals only as abstract ideas in the mind The nominalist position taken by Hobbes and Berkeley goes further and even denies abstract ideas or un versal notions in the mind It holds that universality is a property of words alone which manifests itself in the mean ing of general or common names

In the progressive complication of the con troversy each of the theories which has acquired a traditional title undergoes modification as it is reformulated in d fferent contexts This is es pecially true of the two m ddle positions which tend to lean toward one or the other of the extremes

Locke for example may be called a con ceptualist because he thinks that general names derive their universal s gnificance from the ab stract ideas they signify But though he denies that by means of our universal notions or ab str t ideas we can kno v the real essences of things he does not deny real essences To this

extent he may lean toward moderate realism more than a philosopher like William of Ockham or a psychologist like William James who says *We must decide in favor of the conceptualists* and affirm that the power to think things qualities relations isolated and abstracted from the total experience in which they appear is the most indisputable function of our thought Similarly the development which Aquinas gives to Aristotle s views especially in the point he adds concerning ideas in the mind of God—the eternal exemplars —may be a form of moderate realism which more than Aristotle s has some affinity with the theory of self subsistent ideas as the eternal archetypes for sensible particulars

Aquinas presents his own theory in the context of stating his understanding of the issue between Plato and Aristotle Plato supposed he declares that the forms of natural things subsisted apart from matter and consequently that they are intelligible for a thing is actually intelligible from the very fact that it is immaterial And he called such forms *species* or *ideas* From a participation in these he said that even corporeal matter was formed in order that individuals might be naturally established in their proper genera and species But since Aristotle did not allow that the forms of natural things exist apart from matter and since forms existing in matter are not actually intelligible it follows that the natures or forms of the sensible things which we understand are not actually intelligible

Aquinas speaks of the forms (which exist only in union with matter in individual things) as universal forms even though they are not actually intelligible We abstract universal forms from their particular conditions he says and by doing so we make them actually intelligible The Platonic error in his opinion consists in thinking that the form of the thing known must be in the knower in the same manner as in the thing known From the fact that the form of the thing understood is in the intellect under conditions of universality immateriality and immobility Plato concluded erroneously according to Aquinas that the things which we understand must subsist in themselves under the same conditions of immateriality and immobility

As Aquinas states what he takes to be Aristotle s correction of this error it consists in distinguishing two ways in which the universal can be considered First the universal nature may be considered together with the intention of universality And since the intention of universality—*i e* the relation of one and the same to many—is due to intellectual abstraction the universal thus considered is subsequent in our knowledge Secondly the universal can be considered according to the nature itself (for instance *animality* or *humanity*) as existing in the individual In the order of generation and time the potential universal precedes the actual universal that is the universal form or common nature exists in individual things under conditions of particularity before it exists in the human mind under conditions of abstraction

Even as forms exist in things (thou h they are not actually universal prior to their existence as universal concepts of the mind) so they have a mode of being prior to their existence in things Here Aquinas attributes to Augustine the correction of a pagan error and the substitution for it of a Christian truth Whenever Augustine who was imbued with the doctrines of the Platonists he writes found in their teaching anything consistent with the faith he adopted it and those things which he found contrary to faith he amended Plato positing the forms of things subsisting of themselves apart from matter had supposed that just as corporeal matter by participating in the Idea of stone becomes a stone so our intellect by participating in the same Idea has knowledge of the stone But according to Aquinas it seems contrary to faith that the forms of things should subsist of themselves without matter outside the things themselves Therefore in place of the Ideas defended by Plato Augustine said that the exemplars of all creatures existed in the divine mind It is according to these that all things are formed as well as that the human soul knows all things

THE SOLUTION TO THE problem of universals which Aquinas proposes seems to involve a threefold distinction with respect to the being of forms they are (1) in the human mind by

abstraction from our experience of sensible particulars (2) in individual things and (3) prior to their existence in things in the divine mind

But Aquinas himself says that in God there is no distinction between universal and particular nor does knowledge exist in God after the mode of created knowledge so as to be universal or particular The divine ideas whether considered as the exemplars by which God creates things or as the types and likeness by which God knows them are not abstractions and so do not have the universality characteristic of human concepts Whereas our abstract universals do not give us knowledge of individual things in their singularity the divine ideas according to Aquinas are the principles whereby God at once knows the singular and the universal

If the universal *as such* is not in the divine mind neither in Ockham s opinion is it really in things—not even potentially Everything that exists in an individual—its form and matter all its parts and properties—is the unique and singular possession of that individual If there were something common to two things it would have to be one and two at the same time As common to both it would have to be somehow one and the same in both yet as existing in each it would have to be distinct in each it would have to be as singular in each as each individual thing in which it existed But since Ockham regards this as impossible he concludes that no universal really exists outside the soul in an individual substance nor is it of the substance or the being of things but is only in the soul

The old riddle thus returns in another form If abstract concepts are in the mind—or if as Ockham suggests the logical terms animal and man are universals because predicable of many not through themselves but for the things they signify —then what in reality is the object signified by the universal term or concept? It cannot be the many unless the numerically distinct individuals are also alike as men or animals and how can they be really alike as opposed to being merely conceived as such unless they have a common nature or attribute and to that extent are one and the same?

Locke puts the question another way Since all things are only particulars he asks how come we by general terms or where find we those general natures they are supposed to stand for? He answers that words become general by being made the signs of general ideas and ideas become general by separating from them the circumstances of time and place and other ideas that may determine them to this or that particular existence By this way of abstraction they are made capable of representing more individuals than one each of which having in it a conformity to that abstract idea is (as we call it) of that sort

But if as Locke goes on to say general natures (or genera and species) are nothing else but abstract ideas more or less comprehensive with names annexed to them then in what way do the many individuals represented by one abstract idea have in them a conformity to that abstract idea ? Locke s position seems to avoid this problem Abstract ideas he writes give us no knowledge of existence at all Only particular propositions are about real existences Universal propositions of whose truth or falsehood we can have certain knowledge concern not existence Such propositions express nothing but the agreement or disagreement of our abstract ideas

In addition to denying their reference to reality Locke regards abstract ideas as fictions or contrivances of the mind which are imperfect precisely to the extent that they succeed in being universal The general idea of triangle he observes must be neither equilateral isosceles nor scalene but all and none of these at once In effect it is something imperfect that cannot exist Where Locke seems to mean only that there can be no counterpart in reality to our general ideas Berkeley observing the same imperfection in what are supposed to be abstract ideas denies that they can exist even in the mind I deny he writes that I can abstract from one another or conceive separately those qualities which it is impossible should exist so separated or that I can frame a general notion by abstracting from particulars

Berkeley admits that a man may consider a figure merely as triangular without attending to the particular qualities of the angles or relations of the sides So far he may abstract but

this will never prove that he can frame an ab stract general inconsistent idea of a triangle He recognizes also that all our common names have general significance but he rejects Locke s explanation of their general meaning A word becomes general he says by being made the sign not of an abstract general idea but of sev eral particular ideas any one of which it indif ferently suggests to the mind

Does a nominalist like Berkeley escape the persistent riddle? Does it not reappear in the question which must be asked what is there in this set of particular ideas as opposed to some other set which makes it possible for a general name to signify any one of them in differently? If each particular idea were abso lutely unique and had nothing in common with any other would the universal have any truth even on the level of names?

James thinks the nominalists are somehow forced to admit a *quasi* universal something which we think *as if it were* universal though it is not and in all that they say about this some thing which they explain to be an indefinite number of particular ideas the same vacilla tion between the subjective and objective points of view appears The reader never can tell James continues whether an idea spoken of is supposed to be a knower or a known The authors themselves do not distinguish They want to get something in the mind which shall *resemble* what *is out of the mind however* vaguely and they think that when that fact is accomplished no farther questions will be asked

Some philosophers deal with the universal and particular in a manner which leads away from rather than into the traditional problem

To Spinoza for example univer al terms such as *man horse dog* represent confused im ages drawn from sense experience They pro v de us with an inadequate knowledge of things To know things adequately we must proceed from an adequate idea of the formal essence of certain attributes of God to the adequate knowledge of the essence of things Quite opposite to the abstract universal (or *indeterminate image from experience*) the adequate idea is universal in the totally differ ent sense of comprehendin, an infinite whole

Hegel also distinguishes between abstract universality and true infinity or concrete universality The former is something de terminate *i e* being abstraction from all deter minacy it is itself not without determinacy to be something abstract and one-sided consti tutes its determinacy its defectiveness its finitude The antithesis of the abstract uni versal is the particular the determinate con tent implicitly contained in an abstract uni versal The synthesis is the individual not the particular individual but the infinite indi vidual which is the concrete universal

The concrete universal is neither the uni versal as a common characteristic nor the ab stract universality which stands outside and over against the individual the abstract iden tity of the Understanding It is the uni versality which has the particular as its opposite but the particular which by its reflection into itself has been equalized with the universal This unity is individuality not individuality in its immediacy as a unit but individuality in accordance with its concept For Hegel the concrete universal is the immanent Idea itself It is the manifestation of the Absolute Spirit or God

However it is formulated and whether or not it is or can be solved the problem of the uni versal seems to have a critical bearing on the discussion of many other great ideas In addition to the chapters enumerated at the be innin we can now see that the universal the par ticular and the individual are implicated in the consideration of Being and Infinity Form and Idea Matter and Mind Experience Induction Judgment and Science These chapters in turn do more than throw light on the various solutions proposed to the prob em of the universal They help us understand the importance of the problem—certainly to the philosophers of the western tradition If in the broader context of connected issues it is dis covered that the proof of man s distinctive rationality or even the possibility of an im mortal soul may depend on the affirmation or denial of universals at least a concepts in the mind then perhaps some tolerance and pa tience may be won for the burdensome techni cal ties of the problem

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in **4** Homer *Iliad* bk ii [265 83] **12d** the number **4** is the number of the volume in the set the number **12d** indicates that the passage is in section d of page 12

Page Sections When the text is printed in one column the letters **a** and **b** refer to the upper and lower halves of the page For example in **53** James *Psychology* **116a 119b** the passa e begins in the upper half of page 116 and ends in the lo ver half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand s de of the pa e the letters c and d to the upper and lo ver halves of the right hand side of the page For example in **7** Plato *Symposium* **163b 164c** the passa e begins in the lower half of the left hand side of page 163 nd ends in the upper half of the right hand side of page 164

Author s Divis ons One or more of the main divisions of a work (such as part bk ch sect) are sometimes included in the reference line numbers in brackets are given in certain cases e g *Iliad* bk ii [265 83] **12d**

Bible References The references are to book chapter and verse When the King James and Douay versions differ in title of books or in the nu nbering of chapters or verses the King James version is c ted fi st and the Douay indicated by a (*D*) follows e g Old Test ment *Nehemi h* 7 45—(*D*) *II Esdras* 7 46

Symbols The abbrev ation esp calls the reader s attention to one or more especially relevant parts of a v hole efere ce passim sign fies that the topic is discussed intermittently rather than co it nuously in the work or passage cited

For add tional information oncerning the style of the references see the Explanation of Reference Style for general gu dance in the use of *The G eat Ideas* consult the Preface

1 The distinct on and relat on between universal and p rticul r es ence and individual whole nd part cl s and member one and many same and othe the common and the un que

7 Plato *Laches* **32c 33a** / *Cratylus* **113c 114a c** / *Men* **174 179b** / *Euthyph o* **193c** / *Phaedo* **242c 243c** / *Republ* bk ii **333b d** k vi **383d 388a** bk v **392a 394a** / *Pa m ides* **486d-489a** / *Th et tu* **514b 515d 534d 536b** / *S phist* **559a c 569d 574c** / *Ph l bus* **610d 613a**

8 Aristotle *C tego* ch 2 [1^{a}2 ^{b}9] **5b c** / *Po terior An lyt s* bk ch 11 [77 5–9] **105d 106** ch 24 [85 31 ^{b}3] **116c d** [85^b 5 2] **117a** / *Hea ens* bk i ch 9 [277^{b}26 278^{b}9] **369a d** / *Met phy c* k ch 6 **505b 506b** ch 7 [988 34 ^{b}5] **506c** k i i ch 3 [998 2] c i 4 [1000 4] **517a 518d** ch 4 [1001 8 ^{b}6] **520a b** bk v ch 3 [10 4^{b}3 13] **534d** i 6 [10 6^{b}17 101, 3] **537b** ch 25 [023^{b}17 19] **545b c** c i 25 [1023^b 2]-ch 26 [10 3^{b}3] **545c** bk vii ch 10 [1034^{b}35 1036 25] **558b 559d** ch 13 **562 563a** h 15 **563c 564c** bk x ci 1 2 **578b d 580d** esp c i [1 52^{a}28 3] **578d** bk xii ch 1 [1069 18 25] **598a** ch 4 5 **599d 601a** ch 8 [1074 32 39] **604d** k xii ch 10 **618c 619a c** / *Soul* bk iii ch 5 [430^{a}10-17] **662c**

17 Plotinus *Fourth En ead* t iii ch 2 **142a 143b** tr ix **205a 207a c**

18 Augustine *Chr stian Doctrine* bk iii ch 34 **670c d**

19 Aquinas *Summa Theolog ca* part i q 3 a 2 rep 3 **15c 16a** a 3 **16a d** a 4 rep 1 **16d 17c** a 5 ans **17c 18b** q 4 a 1 rep 3 **20d 21b** q 11 a 3 ans **49a c** q 13 a 9 ans and rep 2 **71b 72c** q 14 a 6 ans **80a 81c** q 16 a 4 rep 1 **97a c** q 30 a 3 ans and r p 1 **169b-170c** a 4 **170c 171b** q 42 a 4 rep 3 **227d 228d** q 77 a 1 rep 1 **399c-401b** q 9 a 5, rep 2 **418c 419b** q 85 a 3 **455b-457a** p rt i ii q a 5 r p 2 3 **618d 619c** q 10 a 1 r 3 **662d 663d** q 46 a 1 ans **813b-814a**

20 Aquinas *Summa Theologica* part i ii q 81 a ans **163a 164d** pa t iii q 2 a 1 an **710a 711c** a 2 an **711d 712d** a 5 re 2 **715a 716b** q 7 a 13 rep 3 **755 756c** art iii suppl q 92 a 1 ans **1025c 1032b**

23 Ho bes *Leviathan* pa t i **55b-c**

28 H rvey *On An mal Generati n* **332a 333b**

31 De carte *Rules* vi **8a 10** / *Object ons and Replies* **123a**

2 The problem of the univer l

2a The re lity of universals their actual exist en e separate form or their poten tial existence in the forms of things

2b Uni ers ls s abstr ct ons o concepts in the human mind

(2 *The problem of the universal* 2b *Universals as abstractions or concepts in the human mind*)

35 Hume *Human Understanding* SECT XII DIV 122 505c d
38 Rousseau *Inequality* 341b 342b
46 Hegel *Philosophy of Right* INTRO par 24 17d 18a
53 James *Psychology* 305a 311a

2c The reduction of universals or abstractions to the meaning of general or common names

23 Hobbes *Leviathan* PART I 55b 56a
31 Descartes *Objections and Replies* 136d 137a
31 Spinoza *Ethics* PART II PROP 40 SCHOL I 387b 388a
35 Locke *Human Understanding* BK III CH VI SECT 32 278a b
35 Berkeley *Human Knowledge* INTRO SECT 11 12 407b-408b SECT 15 409a b SECT 18-19 410a c SECT 122 437b c
35 Hume *Human Understanding* SECT XII DIV 125 507b [fn 1]
53 James *Psychology* 309a 311a

3 The problem of the individual the principle of individuality the concrete universal

8 Aristotle *Categories* C 1 2 [1^a 0–^{b}9] 5b c / *Metaphysics* BK III CH 4 [999^b24 100 4] 518c d CH 6 [1003 5 16] 521d 522a c BK V C 1 6 536a 537c passim BK VII CH 10 [103_5^b 28 32] 559b CH 11 [1037 5 9] 560c CH 15 [1039^b 7 31] 563d BK X CH 1 [1052 28 37] 578d BK XIII CH 9 [1086 2]–CH 10 [1087^a25] 618b 619a c
17 Plotinus *Fifth Ennead* TR VII 238a 239b
19 Aquinas *Summa Theologica* PART I Q 3 A 2 REP 3 15c 16a Q 7 A 1 ANS 31a d Q 13 A 9 ANS 71b 72c Q 14 A 11 ANS and REP 3 84c 85c Q 15 A 3 REP 4 93b 94a Q 29 A 1 162a 163b Q 4 A 2 AN 257b 258c Q 50 A 4 AN and REP 3 4 273b 274b Q 56 1 REP 2 292a d Q 57 A 2 ANS and REP 2 3 295d 297a Q 65 A 3 ANS 341c 342b Q 75 A 4 ANS 381b 382 A 5 ANS 382a 383b A 7 ANS 384d 385c Q 76 A 2 388c 391 Q 84 A 2 ANS 442b 443c Q 85 A 1 ANS and RE 1 2 451c-453c A 5 REP 3 457d-458d A 7 RE 3 459c 460b Q 89 A 4 AN 476c 477a Q 115 A 1 A 5 and REP 3 585d 587c
20 Aquinas *Summa Theologica* PART III Q 2 A 2 ANS 711d 712d A 3 REP 3 713a 714c PART II SUPPL Q 92 A 1 AN 1025c 1032b
31 Spinoza *Ethics* PART II DEF 7 373c
35 Locke *Human Understanding* BK II CH XXV 1 218d 228c passim PASSIM T 3 219d 220a
46 Hegel *Philosophy of Right* PREF 6a 7 INTRO par 5-9 13a 14d par 21 17a c par 24 17d 18a par 26 18b c par 31 32 19c 20b PART III par 207 69b c par 229 75b par 352 353 112b c par 360 113d 114a c ADDITIONS 2 115d 7 117b c 19 119c d / *Philosophy of History* INTRO 156d 157b 158a 159b 160b-178a esp 165a b 176b c 179c d 182d 183c PART III 285b d

4 Universals and particulars in the order of knowledge

4a Universals as objects of knowledge the intuitive or reflexive apprehension of universals

7 Plato *Cratylus* 113c 114a c / *Meno* 179c 183a / *Phaedo* 224a c 228a 230c 231c 232a / *Republic* BK III 333b-d BK V 370d 373c BK VI 383d 388a / *Parmenides* 489d-491a / *Theaetetus* 535b 536a / *Sophist* 570a 574c / *Seventh Letter* 809c 810b
8 Aristotle *Posterior Analytics* BK I CH II [77^a5-9] 105d 106a / *Physics* BK I CH 5 [188^b26–189^a9] 264b c BK VII CH 3 [24 ^{b}1 7] 330b / *Metaphysics* BK I CH 6 [987^a29–^{b}] 505b c CH 9 [990^b9 28] 508d 509 BK III CH 4 [999 24 ^{b}5] 518a b BK XIII CH 9 [1086^a 29–^{b}12] 618b-c / *Soul* BK II CH 5 [417^b17 23] 648b c
9 Aristotle *Ethics* BK VI CH 3 [1139^b25 34] 388c
18 Augustine *Confessions* BK X par 19 76a b / *City of God* BK VIII CH 6-7 269b-d BK XI CH 27 337d 338a / *Christian Doctrine* BK II CH 38 654b c
19 Aquinas *Summa Theologica* PART I Q 14 A 11 RE 1 84c 85c Q 55 A 3 REP 1 2 291a d Q 76 A 2 REP 3 4 388c 391a Q 84 A 1 ANS 440d 442a A 4 ANS and REP 1 2 444d 446b A 5 446c 447c A 6 ANS 447c 449a A 7 ANS and REP 1 449b 450b Q 85 A 1 ANS and REP 1 2 451c 453c A 2 453d-455b Q 86 A 1 A 5 and RE 4 461c 462a A 2 REP 4 462a-463a PART I II Q 1 A 2 REP 3 610b-611b Q 2 A 6 ANS 619d 620d Q 29 A 6 ANS and REP 1 3 748b 749a Q 30 A 4 REP 2 751c 752b
20 Aquinas *Summa Theologica* PART III Q 10 A 3 REP 2 769d 771b PART III SUPPL Q 92 A 1 ANS 1025c 1032b
35 Locke *Human Understanding* BK IV CH III SECT 31 323c d
53 James *Psychology* 308a 314 passim

4b Universals in relation to the angelic intellect and the divine mind

19 Aquinas *Summa Theologica* PART I Q 14 A 1 RE 3 75d 76c A 11 84c 85c Q 16 A 7 REP 2 99a d Q 22 A 2 ANS 128d 130d Q 55 AA 2 3 289d 291d Q 57 A 1 REP 3 29 a d A 2 295d 297a Q 84 A 2 ANS 442b-443c A 4-5 444d 447c Q 105 A 1 REP 2 538d 539c Q 106 A 1 ANS 545d 546d Q 108 A 1 ANS 552c 553c

4c The abstraction of uni ersal concepts from the particulars of sense

8 ARISTOTLE *Prior Analyt cs* BK II CH 21 87d 89b / *Posterio Analytics* BK I CH I [71 16–b8] 97b-d CH 11 [77a5–9] 105d 106a BK II CH 19 [99b20–100b3] 136a d / *Soul* BK III CH 4 [429 18–29] 661c CH 7 [431 14]–CH 8 [432 14] 663d 664d / *M mory and Remi iscence* CH 1 [449b30–450a10] 690c d

9 ARISTOTLE *Ethics* BK VI CH 8 [114 13 19] 391b

19 AQUINAS *Summa Theol gica* P RT I Q 13 A 9 ANS 71b-72c Q 14 A I R P I 84c 85c Q 16 A R P 2 99a d Q 40 A 3 ANS 215c 216d Q 55 A 3 291a d Q 57 A 2 REP 1 3 295d 297a Q 75 A 5 ANS and REP 1 382a 383b Q 76 A 2 AN and RE 3 4 388c 391a Q 79 AA 3–5 416a-419b Q 84 440b-4 1b Q 85 AA 1 4 451 457d Q 86 A 1 NS and REP 4 461c 462a A 2 ANS and REP 2 4 462a-463a Q 89 A 4 ANS and R P I 476c-477a PART I II Q 29 A 6 ANS and REP 1 3 748b-749a

20 AQUINAS *Summa Theol gica* PART III Q 2 A 5 R 2 715a 716b PART III SUPPL, Q 92 A 1 NS 1025c 1032b

28 H RV Y *On Animal Generat on* 332a 334d

31 D S R ES *Di cour e* PART IV 53b / *Objec t ons nd Replies* 167c-d 215b-c 216d 217d

31 S INOZA *E hics* ART II PROP 40 SCHOL 1 2 387b 388b

35 LOCKE *Human Understanding* BK I CH I SECT 15 98d 99 BK II CH XI S CT 9 145b-c CH XII SECT I 147b-c BK III C I III SECT 6–9 255c 256c CH IV SECT 6 263b-c C I SEC 32 277c 278b BK IV CH VII CT 9 338d 339b esp 339a b CH IX SECT 1 349a

35 B RKELEY *H man Knowledge* INTRO SECT 6–16 405d-409d passim esp SE T 12 16 408a 409d SECT 5 414a b SECT 97 00 431d-432c

35 H ME *Human Understanding* S CT XII DIV 122 505c d

38 ROU S AU *Inequality* 341b 342b

4 KANT *Pur Re son* 45d 46 115b c

53 JAN ES *Psychol y* 308a 311a

4d The distinct on between part cul r nd uni ersal in rel tion to the di t nct on between pe cept and concept o be tw en image and idea

7 PLATO *C atylu* 113c 114 c / *Phaedru* 126b-c / *Republic* BK III 333b d BK VI 386d 388a / *Theaet tu* 534d 536b / *Seventh Letter* 809c 810d

8 A ISTOT E *P sterior Analytics* BK I H 18 111b-c CH 31 120a c BK II CH 9 [99b33 100b5] 136b-d / *Physics* BK I CH 5 [89a5–9] 264b-c / *Metaphy ics* BK I CH [980a–8–98 b 3] 499a 500a BK II CH 4 [999a24 b5] 518 b BK VII H 10 [1 35b35 1 36 1] 559b-c / *So ul* K II CH 5 [41 b17 28] 648b-c

9 ARISTOTLE *Ethics* BK VII CH 3 [1147b3 6] 397d

18 AUGUSTINE *Conf ssions* BK X par 16–19 75b-76b

19 AQUINAS *Summa Theologica* PART I Q 57 A 2 295d 297a Q 81 A 3 ANS 430c-431d Q 84 AA 1 2 440d-443c AA 6–8 447c-451b Q 85 A 1 451c-453c A 3 ANS 455b-457a Q 86 A 1 ANS 461c-462a PART I II Q 17 A 7 AN 690d 692a Q 9 A 6 ANS and REP 1 3 748b 749a

31 DESCARTES *Meditat ons* VI 96d 97a / *Objec tions and Replie* 136d 137a 138d 139a 218c-d

31 SPINOZA *Ethics* PART II PROP 44 389b-390

35 LOCKE *Human Understand ng* BK II CH XI SECT 8–9 145b-c BK IV CH VII SECT 9 339a b

35 BERKELEY *Human Knowledge* INTRO SECT 6–19 405d 410c pass m esp SECT 12 16 408a 409d SECT 126–128 438b d

38 ROUSSEAU *Inequality* 341d 342a

42 KANT *Pure Reason* 23 24a 115b c

53 JAM *Psychology* 307b-311a esp 307b-308b 311b 312b [fn 1] 480b-484a esp 482b-483b

4e The inadequacy of our knowledge of ind idu ls their indefinability

8 ARISTOTLE *Categori s* CH 5 [2b6–37] 6c 7a / *P sterior Analyti s* BK I CH 31 1 0a-c / *Physics* BK I CH 5 [188b26–189a9] 264b c K V I CH 3 [247b1–7] 330b / *Metaphysics* BK I I CH 4 [999a24 b5] 518a b CH 6 [1003 5 7] 521d 522a c BK VI C I 10 [035b33 1036a1] 559b-c CH 15 563c 564c K XI CH 2 [1060b 20– 3] 588d K XIII CH I 618c 619a c

9 AR TOTLE *Rhetoric* K I CH 2 [356b28–35] 596b-c

19 AQUINAS *S mma The logica* PART I Q 3 A 3 ANS 16 d Q 12 A 8 REP 4 57b 58b Q 13 A 9 ANS 71b-72c Q 14 A I 84c 85c Q 15 A 3 REP 4 93b-94a Q 29 A I R 1 162a 163b Q 56 A I R 292a d Q 57 A 2 295d 297a Q 86 A 461c 462 Q 89 A 4 476c-477a

20 AQUINAS *Summa Theologica* PART III Q 11 A R P 3 772b 773a

53 J ES *P ychol gy* 312a

4f The gener l ty of c ence the univer lity of its p nciples

7 PLATO *Republ c* BK VI 383d 388 BK V I 391b 398c

8 A STOTLE *P sterior Analytics* K C 1 4–5 100a 102b CH 11 [77a5–9] 105d 106 C 1 3–14 107 109a CH 18 111b-c CH 24 116b-118a CH 3 120a-c BK I CH 8–19 135d 137a c / *Physics* BK I CH 1 259 b / *Met physic* BK CH 1 499a 500b CH 2 [982a21 25] 500 BK VI CH 1 [10 6a23 33] 548b- K VI CH 5 563c 564c BK XI CH 7 [1064b6– 3] 592d 593a

9 AR STOTLE *Ethic* BK VI CH 3 [1 39b25 34] 388c K X 9 [8 3 23] 435b-c / *Rhet ric* 2 [1356b 8–35] 596b-c

5. Universal and particular in relation to grammar and logic

5a. The distinction between proper and common names

5b. The classification of universals: their intension and extension; their degrees of generality

5c. Particulars and universals in predications or judgments: the quantity of propositions; the universal, the particular, and the singular judgment

35 LOCKE *Human Understand g* BK IV CH V SECT 10 331a CH VI 331b 336d CH IX SECT I 349a H XI SECT 13-14 357d 358c CH XVII SECT 8 377b-d
42 KANT *Pure Reason* 14c 15c 39c-41c esp 39d 40a 51d 52b

5d Rules concerning the un versality and particul rity of prem ses in re oning the quant ty of the conclusion in rel tion to the quantity of the premises

8 ARI TOTLE *Prior A lyt s* BK I CH 4 7 40d 45b CH 24 58b-d CH 26 59d 60b / *Poster or An lytics* K I CH 14 108d 109a CH 24 116b 118a
9 ARISTOTLE *Eth s* BK VII CH 3 [146^b35-147^b18] 397a 398a / *Rhetoric* BK I CH 2 [1357^a23-$^b24$] 596d 597c
19 AQUINAS *Summa Th ologica* P RT I Q 86 A I R P 2 461c 462a
20 AQUINAS *Summa Theol gica* PART I II Q 76 A AN 141a Q 77 A 145d 147c
35 LOCK *Hum U dersta di g* K IV CH XVII S CT 8 377b d
42 KANT *Pur Rea on* 110d 112d esp 110d 111c 118a c / *J dgement* 540a b esp 540b [fn 1]

6 Applicat on of the d stinct on betw en uni e sal and particular

6a P rt cular and univer al in the analysis of matter and form

8 AR S OTLE *Met phys s* K V CH 28 546b c K VI CH I [1035^b28 32] 559b CH II [37^a 5-9] 560c K X CH 4-5 599d 601a BK X I H I 618c 619a c esp [1087^a10-25]619c / *S ul* BK I CH I [412 6-8] 642a BK III CH 5 [430 10-17] 662
17 PLOT NUS *S ond En e d* TR IV 50a 57 / *S th Enne d* TR II CH 3 282a c
19 AQU NAS *Summa Th ol gica* RT Q 3 RE 3 15 16 A 3 ANS 16a d Q 4 A RE 3 20d 21b Q 7 A I ANS 31a d Q 14 A II AN 84c 85c Q 19 A 6 ANS 113c 114d Q 9 A REP 4 162a 163b A R 3 163b 164b A 3 REP 4 164 165c Q 47 A 2 AN 257b 258 Q 65 A 3 AN 341c 342b Q 75 A 4 N 381b-382a Q 76 A 2 388c 391a A 3 REP 391 393a Q 84 A 2 NS 442b 443 Q 85 A I REP 2 451c 453c A 5 R 3 457d 458d A 7 REP 3 459 460b Q 15 A I AN and RE 3 585d 587c Q 9 A AN 604 607b P RT I I Q 2 A 6 AN 619d 620d
20 AQUINAS *Summ Theol g ca* PART III Q 2 A 2 ANS 711d 712d

6b Uni e s l and part cular cau es

8 AR STOTL *Po t r A alytic* K I C 2 [71^b33 72^a6] 98b-c / *Phy cs* K I H 5 [88^b 6- 89^a9] 264b / *Met phy cs* BK I CH 6 505b-506b BK V H [14 5 25] 534b K X I CH 4-5 599d 601a

19 AQUINAS *Summa Th ologica* PART I Q 5 A 2 24b 25a Q 14 A II ANS 84c 85c Q 19 A 6 ANS nd REP 3 113c 114d Q 2 A 2 128d 130d Q 55 A 3 REP 3 291a d Q 57 A 2 ANS 295d 297a Q 65 A 3 ANS 341c 342b Q 84 A 2 ANS and REP 3 442b-443c Q 115 A 2 AN 587c 588 PART I II Q I A 2 REP 3 610b 611b Q 9 A 6 662 d Q 46 A I ANS 813b-814
20 AQUIN S *Summa Theol g ca* PART III Q 4 A 4 REP I 733a 734a
31 S NOZA *Ethics* PART I PROP 16 362a PROP 28 365 366a

6c The un ersality of law and particular dis pensations of equ ty

7 PL TO *Laus* K VI 699d 700b BK IX 754a d K XI 777d 778b BK XII 785c 786a
9 ARISTOTLE *Eth cs* BK V CH 7 382c 383a H 10 385c 386b / *Pol tics* BK I I CH 16 485b 486c BK IV CH 4 [I 92 19 37] 491c d / *Rhet ori* BK I H [1354^a26-$^b16$] 593b d CH 13 [1373^b1 1,] 617c d [1374 17-$^b24$] 618c 619a
20 AQUINAS *Summa Theol gica* ART I Q 9 A I REP 2 205b 206b Q 96 A 6 235a d Q 97 A 4 238b 239b Q 100 A 8 AN and R P I 259d 261a
23 HO S *Lev athan* PART I 94d PART II 133d 135d 144c 156b c
35 LOCKE *Civil Gover ment* CH II SECT 6 26b c CH X SECT 135 139 55d 58a SE T 14 58b H XIV SECT 159 62b-c CH XVI S CT 195 70a b
36 SWIFT *Gi ll er* PART IV 152b-154a
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38 ROUS AU *So al Cont ct* BK II 397 d 399b-400c
41 G ON *Decl and Fall* 73d 74b 77d 78a 88 89d 91b 96d
42 KANT *Pu Re on* 60a c / *P act l R ason* 305d 307d / *Scie e f R ght* 399c 400
43 FEDER L T NU BER 78 232c d NUM ER 8 237a b NU R 83 244b 245c pass m 248d 249a
46 H GEL *Phi ophy f Right* PART III par 209 69d pa 14 71 p r 16 71d 72a par 19 72d 73 par 2 3 229 73c 75b ADD T ON 32 137d 138b 34 138b c 41 139 / *Phi los phy f H st y* P RT IV 364d 365a

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7a The iss e concern ng the un rs l ty of truth

7 P TO *C atyl* 86 d / *Th a t tu* 517b-532
8 A TO E *M t phy* K IV CH 5 6 528c 531 K X CH [33 3] 580a BK XI CH 6 590d 592b

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12 LUCRETIUS *Nature of Things* BK IV [469-5 1] 50b 51a
12 EPICTETUS *Discourses* BK II CH 20 164c 166c
18 AUGUSTINE *City of God* BK XIX CH 18 523a b
19 AQUINAS *Summa Theologica* PART I Q 2 A 1 REP 3 10d 11d Q 16 A 1 REP 2 94b 95c A 7 REP 2 99a d Q 85 A 2 ANS 453d-455b
23 HOBBES *Leviathan* PART I 56b 65c PART IV 267b
25 MONTAIGNE *Essays* 209c 212a 240c 246a 251d 253c 259c 261c 267c d 271b 272d 318a 319b 439c 440a
30 BACON *Advancement of Learning* 13a c 57d 58b / *Novum Organum* BK I APH 67 115d 116a
31 DESCARTES *Rules* I II 1a 3b / *Discourse* PART II 46b c / *Meditations* V 95b 96a / *Objections and Replies* 272a 273a
33 PASCAL *Pensees* 72 181a 184b esp 182b 381 385 238b 239a / *Vacuum* 358b
35 LOCKE *Human Understanding* INTRO SECT 4-7 94a 95c esp SECT 7 95a c BK IV CH XI SECT 13 14 357d 358c
35 BERKELEY *Human Knowledge* PREF 404a INTRO SECT 1 5 405a-d SECT 40 420b SECT 101 102 432c 433a
35 HUME *Human Understanding* SECT I DIV 8-9 454b-455a esp DIV 9 455a SECT XII DIV 126-128 507a 508a
42 KANT *Pure Reason* 36a 37b 129c 130a 194b c 202b 203c 218d 222b 224a 227a 240b 243c / *Practical Reason* 311d 313d
43 MILL *Liberty* 274b 293b passim
46 HEGEL *Philosophy of History* INTRO 160b 178a
53 JAMES *Psychology* 639a 646a 671a 672a 880b 881a

7b The issue concerning the universality of moral principles

5 EURIPIDES *Phoenician Maidens* [499-502] 382b
6 HERODOTUS *History* BK II 97d 98a
7 PLATO *Protagoras* 58a 62d / *Cratylus* 86a d / *Meno* 183b 184c 187d 190a c / *Gorgias* 271b 277 passim / *Republic* BK VI 383d 386c / *Theaetetus* 525c 526a 528b 532a / *Laws* BK X 760c
9 ARISTOTLE *Ethics* BK I CH 3 339d 340b CH 7 [1098a25 b8] 343d 344a BK II CH 2 [1104a1 9] 349b c BK II CH 4 359a c BK V CH 7 382c 383a BK X CH 1 [1152b1 3] 403c CH 12 [1152b2 33] 403d 404 BK X C 5 [1176a3 9] 430c d / *Politics* BK I CH 6 [255a32 37] 449 BK VII CH 1 [1323a34 36] 527b
12 AURELIUS *Meditations* BK IV SECT 4 264
18 AUGUSTINE *Confessions* BK III par 13 16c d / *Christian Doctrine* BK III CH 14 663c d
19 AQUINAS *Summa Theologica* PART I Q 1 A 7 ANS 614c 615a
20 AQUINAS *Summa Theologica* PART I II Q 77 A 2 145d 147c Q 94 A 4 223d 224d
23 HOBBES *Leviathan* PART I 57d 58a 61d 62a 91a 92b 95d 96b PART II 140b PART IV 272c
25 MONTAIGNE *Essays* 46b 47c 93b-c 115b-119d 124c 125a 146b-c 209c 212a 281a 284c
27 SHAKESPEARE *Hamlet* ACT II SC II [254 25] 43b / *Troilus and Cressida* ACT II SC I [51-60] 114a b
31 DESCARTES *Discourse* PART II 46b-c
31 SPINOZA *Ethics* PART I APPENDIX 371b 372d PART IV PREF 422b d-424a PROP 8 426b-c PROP 64 444b
33 PASCAL *Provincial Letters* 29b-44a / *Pensées* 309 228b 312 229a 325 230b-231a 381 385 238b 239a
35 LOCKE *Human Understanding* BK I CH II SECT 1 21 103d 111a passim BK II CH XXI SECT 55 56 192c 193b
35 HUME *Human Understanding* SECT XII DIV 132 509c d
38 ROUSSEAU *Inequality* 330d 331c 343d 345c 362a b / *Political Economy* 369 370a / *Social Contract* BK IV 434c
42 KANT *Pure Reason* 173b 174a 239a b / *Fund Prin Metaphysic of Morals* 253d 254d 260a 261d 264b d 265c 266d 270d 271a 273d 287d esp 275b-d 277d 279d, 281c 283d / *Practical Reason* 294c 295d 297a 314d esp 301a 307d 314d 317a b / *Pref Metaphysical Elements of Ethics* 372b-d 377c d / *Intro Metaphysic of Morals* 388b c 390b d 391c 392b 393a / *Science of Right* 397a 398b / *Judgement* 478a-479d
43 MILL *Liberty* 269c 270c 274b 293b passim / *Utilitarianism* 445c 446d 461c-464d 471b 476a c
46 HEGEL *Philosophy of Right* PART I par 89 35c d PART II par 107 40b-c par 112 41c d par 135 47b d ADDITIONS 71 127b c 86 129c 131 137d / *Philosophy of History* PART II 280b 281b
49 DARWIN *Descent of Man* 314c 316a
50 MARX ENGELS *Communist Manifesto* 427 b 428b d
51 TOLSTOY *War and Peace* BK V 194a 195a 213a 216c BK XIV 611a c EPILOGUE I 645a 646c
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7c The issue concerning the universality of aesthetic standards the subjective universal

7 PLATO *Ion* 142a 148a c / *Symposium* 167a d / *Statesman* 593d 595a / *Laws* BK II 653c 656b 660 662a BK I 675c 676b
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The character and conditions of individual existence *see* IDEA 1f MATTER 1c and for the problem of our knowledge of individuals *see* FORM 3b KNOWLEDGE 5a(4)

Discussions relevant to the consideration of universals as objects of knowledge *see* FORM 1a IDEA 1a KNOWLEDGE 6a(3)

Various statements of the theory of abstraction and of the distinction between sensory images and abstract ideas *see* IDEA 2g MEMORY AND IMAGINATION 5b 6c(1) SENSE 5a and for the abstraction of universal concepts in relation to inductive generalization *see* EXPERIENCE 2b INDUCTION 1a

The universality of scientific laws *see* SCIENCE 4d

Another discussion of proper and common names *see* SIGN AND SYMBOL 2d

The ordering of universal concepts according to their degrees of generality *see* IDEA 4b(3) 5d RELATION 5a(4) SAME AND OTHER 3a(1)

Universal and particular in the logical theory of judgment and reasoning *see* JUDGMENT 6a REASONING 2a(2)

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The conception of equity as rectifying the imperfection of laws which results from their universality *see* JUSTICE 10d LAW 5h

Other comparisons of history poetry and philosophy *see* HISTORY 1 PHILOSOPHY 1d POETRY 5b TRUTH 4b

Other discussions of the true the good and the beautiful as objective or subjective absolute or relative *see* BEAUTY 5 CUSTOM AND CONVENTION 5a 9a-9b GOOD AND EVIL 6d RELATION 6b-6c TRUTH 7b

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World* but relevant to the idea and topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collection
II Works by authors not represented in this collection

For the date place and other facts concerning the publication of the works cited consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*

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—— *The Analysis of Matter* CH 27
—— *Human Knowledge Its Scope and Limits* PART I CH 3 10 PART IV CH 8

Chapter 97 VIRTUE AND VICE

INTRODUCTION

IN their currently popular connotations the words virtue and vice have extremely limited significance Virtue tends to be identified with chastity or at least with conformity to the prevailing standards of sexual behavior The popular notion of vice retains a little more of the traditional meaning insofar as it implies injury to a person s character or health as the result of strong *habitual* addictions But as in the case of virtue the things which are popularly called vices are largely concerned with pleasures or sensual indulgences

In the tradition of the great books however the scope of these terms and the range of the problems in which they are involved seem to be co-extensive with morality or in other words with the broadest consideration of good and evil in human life with what is right and wrong for man not only to do but also to wish or desire and even to think For some of the great moral philosophers other terms—such as duty for Marcus Aurelius and Kant or pleasure and utility for Mill—seem to be more central But for Plato Aristotle and Aquinas virtue is a basic moral principle By reference to it they define the good man the good life and the good society Yet even for them it is not the first principle of ethics They define virtue itself by reference to a more ultimate good—happiness For them the virtues are ordered to happiness as means to an end

THE ANCIENT ENUMERATION of particular virtues may show the range of things comprehended under the notion of virtue generally It may also further sharpen the contrast with the contemporary tendency to use the words virtue and vice as if they applied only to matters which fall within the sphere of one of the virtues That one is the virtue which both Plato and Aristotle call *temperance and which they* conceive as concerned chiefly with the bodily appetites and pleasures Plato and Aristotle give somewhat different enumerations but courage and justice are as fundamental for them as temperance and when certain virtues come later to be classified as the cardinal or principal virtues these three are always named together In that classification there is a fourth—prudence or as it is sometimes called practical wisdom

Plato s enumeration of the virtues in the Republic also adds wisdom to temperance courage and justice This indicates at once that the ancient conception of virtue as the quality which makes a man good extends to his mind as well as to his character—to the sphere of thinking and knowing as well as to desire emotion and action Aristotle makes this explicit by dividing all the virtues into moral and intellectual or excellences of character and of mind He names five intellectual virtues in addition to wisdom and prudence (which he distinguishes as speculative and practical wisdom) he lists art science and what he calls intuitive reason which Aquinas later calls understanding

The division of the virtues into moral and intellectual leads in Aristotle s analysis to the further distinction between those intellectual virtues—understanding science wisdom—which represent the possession of speculative insight or theoretic knowledge and those—art and prudence—which represent skill in practical thinking or in the application of knowledge to production and action respectively Because it is concerned with action or moral conduct the virtue of prudence is most closely associated with the moral virtues of justice courage and temperance The grouping together by Aquinas of these four as the cardinal virtues carries the implication that the remaining four (*i e art and the three virtues of the speculative rea*

son) play a secondary role The implication is simply that a man may be made good as a scientist or good as an artist by the acquisition of these virtues but he is not made good as a man by these virtues nor do they enable him to lead a good life and achieve happiness as do the moral virtues accompanied by prudence

In line with the principle by which he regards certain virtues as cardinal or indispensable for human rectitude and welfare the Christian moralist goes further than the moral philosopher in developing the theory of virtue Considering man s limitations and his fallen nature he holds that more than all the natural virtues (*i e* the virtues which men can attain by their own effort) is required for salvation—for the supernatural end of eternal happiness Faith hope and charity according to St Paul are indispensable to lift man s life to a plane and direct it to a goal which exceed his nature These gifts of God s grace are subsequently treated by Augustine and Aquinas as virtues—supernatural not natural virtues Aquinas specifically calls them theological virtues to distinguish them from other supernatural endowments such as the infused moral virtues and the gifts of the Holy Ghost

THE READER MAY OBSERVE that of all the virtues so far named only the three *theological* virtues are not the subject of separate chapters in this collection of great ideas The chapters on COURAGE JUSTICE TEMPERANCE PRUDENCE WISDOM may include discussions of these qualities which do not specifically treat them as virtues Certainly that is true of the chapters on ART and SCIENCE and the chapter on PRINCIPLE wherein the virtue of intuitive reason or the understanding of first principles is considered Nevertheless that all but one of these chapters bear the name of the traditionally recognized virtues indicates how widely and variously they make their appearance throughout the great books—by example and comment in poetry and history as well as by definition and analysis in the ethical and political treatises In contrast the theological virtues appear only in Christian not pagan literature and then mainly in religious rather than secular writing

It is also of interest to note the relation which this chapter bears to those dealing with other fundamental concepts of moral philosophy or theology Some of the terms mentioned in the foregoing paragraphs—duty pleasure happiness good—name chapters which are co implicated with this one in the problem of how men should live and what they should seek The Outline of Topics will reveal still others—knowledge desire emotion reason will wealth, honor friendship teaching family state citizen law sin and grace—each of which is (or indicates) the title of a chapter that treats of matters related to virtue as cause or consequence as psychological factor or external condition

One chapter not yet mentioned has maximum relevance for most of the authors who offer some analysis of virtue The chapter on HABIT treats an idea that is crucial to the definition of virtue Aquinas for example allocates the discussion of virtue and vice to his Treatise on Habit in the *Summa Theologica* He divides this treatise into questions concerning habits in general and questions concerning good and evil *habits—or virtues and vices*—in particular But the notion that virtue combines the elements of habit and goodness is not peculiarly his With varying degrees of emphasis and explicitness it appears in Plato and Aristotle in Augustine Bacon Hegel and James Kant alone expressly *dissents declaring that virtue is* not to be defined and esteemed merely as *habit* and as a long *custom* acquired by the practice of morally good actions

THE DISCUSSION OF VIRTUE originates in the dialogues of Plato and the *Ethics* of Aristotle with a number of related questions Meno s opening question— Can you tell me Socrates whether virtue is acquired by teaching or by practice or if by neither teaching nor practice then whether it comes to man by nature or in some *other way?* —*requires in the* opinion of Socrates other questions to be faced what virtue is how virtue is related to knowledge whether virtue is one or many and if many how the several particular virtues are related to one another

In the course of the dialogue each of the alternatives is considered If virtue were identical with knowledge it could be taught and learned just as geometry is If virtue were simply a hab-

it it could be acquired by practice that is by the repetition of similar acts But neither practice nor teaching seems by itself to explain how men come by virtue and even less why virtuous fathers should so often fail to produce virtue in their sons Yet Socrates does not completely dismiss these possibilities or the possibility considered at the end that virtue comes to the virtuous by the gift of God What truth there is in each of them he concludes cannot be determined until we know precisely what virtue is

Another dialogue the *Protagoras* pursues a similar inquiry and seems to reach a similarly indeterminate onclusion The relation of virtue to knowledge here leads to the question whether wisdom and temperance and courage and justice and holiness are five names of the same thing To the extent that each depends on knowledge of what is good and evil they would seem to be if not identical at least inseparable aspects of the same thing Protagoras objects on the score that a man may be courageous and at the same time utterly unrighteous unholy intemperate ignorant But Socrates finally gets him to admit reluctantly that courage consists in knowledge and cowardice in ignorance of what is and is not dangerous

It was Protagoras, however who originally contended against Socrates that virtue can be taught The reduction of all the virtues to some form of knowledge would therefore seem to confirm his opinion Socrates in winning the argument about virtue and knowledge seems to overthrow his own view that virtue cannot be taught The result of our discussion Socrates says at the end appears to me to be singular For if the argument had a human voice that voice would be heard laughing at us and saying Protagoras and Socrates you are strange beings there are you Socrates who were saying that virtue cannot be taught contradicting yourself now by your attempt to prove that all things are knowledge including justice and temperance and courage—which tends to show that virtue can certainly be taught Protagoras on the other hand who started by saying that it might be taught is now eager to prove it to be anything rather than knowledge

The only way this terrible confusion of our ideas might be cleared up Socrates suggests is for the conversation to go on until we ascertain what virtue is But that particular conversation does not go on nor do the definitions of virtue which are proposed in other Platonic dialogues seem to be decisive on the point whether virtue is knowledge or whether it can be taught In the *Laws* for example the Athenian Stranger saying that harmony of the soul taken as a whole is virtue proposes that education should consist in training the first instincts of virtue in children by producing suitable habits in them But his training does not seem to be like ordinary teaching the inculcation of knowledge It is training in respect of pleasure and pain whereby we are led to hate what we ought to hate and love what we ought to love

In the *Republic* Socrates compares the harmony produced by virtue in the soul with the harmony of the parts in a healthy body Virtue is the health and beauty and well being of the soul he declares and vice the disease and weakness and deformity of the same Though wisdom consists in the rule of the other parts of the soul by reason in the light of knowledge of what is for the interest of each of the parts and of the whole it does not seem to be the whole of virtue nor does Socrates suggest that men become virtuous simply by becoming wise On the contrary he intimates that good practices lead to virtue and evil practices to vice and that like certain bodily qualities the virtues of the soul can be implanted by habit and exercise

IT IS SOMETIMES SUPPOSED that Aristotle differs from Plato on fundamental points in the theory of virtue The fact that Aristotle criticizes Socrates for thinking that all the virtues are forms of practical wisdom seems to imply a basic disagreement on the relation of virtue to knowledge But Aristotle also remarks that Socrates was right in saying they implied practical wisdom His own view that the moral virtues of courage temperance and justice are insparable from the intellectual virtue of prudence does not seem to differ substantially from the statements of Socrates that virtue must be a sort of wisdom or prudence and that virtue is either wholly or partly wisdom Such differ

ence as there is appears to be not so much in what is being affirmed or denied as in the manner of statement or analysis and beyond that perhaps in a method of exposition which permits Aristotle to give definite answers to questions Plato s dialogues often leave unanswered

Aristotle s analysis of course sometimes changes the questions themselves to make them answerable but this is not always so His summary of existing opinions concerning the acquisition of virtue—that some think we are made good by nature others by habituation others by teaching —is nearly equivalent as an enumeration of the possibilities to Meno s opening question But where Socrates in answering Meno contents himself with suggesting that there may be some truth in each possibility as against the others Aristotle definitely affirms that the whole truth about the matter combines all three factors There are three things he writes which make men good and virtuous these are nature habit rational principle Even Socrates final point that virtue may be a gift of God seems to be affirmed by Aristotle s comment that in effecting virtue nature s part evidently does not depend on us but as a result of some divine causes is present in those who are truly fortunate

But in the case of two Platonic questions—the one about the relation of virtue to knowledge and the other about the unity of virtue—Aristotle s analysis transforms the problem His basic distinction between moral and intellectual virtue turns the question about virtue and knowledge into one concerning the role which one very special kind of knowledge represented by the virtue of prudence plays in the formation and operation of good moral habits— habits in the sphere of action and passion or of the will and the emotions By substituting a number of distinct intellectual virtues for the single term knowledge Aristotle can definitely answer both Yes and No to the question Not all the intellectual virtues not art and science or even speculative wisdom are needed for courage temperance and justice but if by knowledge is meant nothing more than prudence then Aristotle affirms these moral virtues to involve knowledge of a sort

The distinction between moral and intellectual virtue also enables Aristotle to reformulate the problem of the unity of virtue Instead of asking whether there is only one virtue having many aspects or many distinct virtues he considers which virtues are interdependent and which can exist separately from one another Virtue has unity in the inseparability of the moral virtues from one another and from prudence The sailor who appears to be courageous without being temperate or the thief who appears to be prudent without being just has only the appearance of these virtues But though Aristotle uses the phrase perfect virtue to signify both the integration of these virtues and the perfection of each when it is integrated with the others he does not include all the particular virtues in the unity of virtue Some like art and science can exist apart from prudence or the moral virtues and they from it

By showing how all of the moral virtues depend upon prudence or practical wisdom Aristotle thinks he is able to refute the argument that the virtues exist in separation from each other But he does not find any greater unity of the virtues than is involved in their inseparability as a result of their common dependence on prudence Following Aristotle Aquinas criticizes those who assert a more profound unity by claiming that prudence temperance fortitude and justice signify only certain general conditions to be found in all the virtues This according to Aquinas is tantamount to denying that they are distinct habits

Insisting that they are really distinct as habits Aquinas nevertheless suggests that these four virtues qualify one another by a kind of overflow For he explains the qualities of prudence overflow into the other virtues in so far as they are directed by prudence And each of the others overflows into the rest for the reason that whoever can do what is more difficult can do what is less difficult The man who can curb his desires for the pleasures of touch which is a very hard thing to do is more able to check his daring in dan ers of death which is much easier the man who can withstand the dangers of death which is a matter of great difficulty is more able to remain firm against the onslaught of pleasures

As for justice Aquinas holds that legal just ce, by command ng the other virtues draws

them all into the service of the commonweal Aristotle also sees a certain unification of the virtues at least all the moral virtues in terms of justice—the kind of justice he calls general to distinguish it from the special virtue of justice. He conceives general justice as com prising all the moral virtues including special ju tice insofar as all these virtues are directed toward the welfare of society and the good of other men Justice in this sense he writes is not a part of virtue but virtue entire Holding that it is complete virtue not absolutely but in relation to our neighbor he also adds that it is complete because he who possesses it can exercise his virtue not only in himself but towards his neighbor as well

Some writers tend in the opposite direction toward a greater separation of the virtues Jus tice according to Marcus Aurel us is prior to the other virtues for in justice the other vir tues have their foundation In suggesting that a man can secure a favorable and commodious interpretation of his vices by coloring them in the light of his virtues Bacon seems to accept the conjunction of virtue with vice which is expressed in the familiar phrase the defects of one s virtues That a gentleman may with honor be permitted certain failings is similarly impl ed by Dr Johnson s reference to the genteel vices

This comfortable doctrine that a man can be truly virtuous in some aspects of character while vicious in others seems however to be rejected by Montaigne and Kant as well as by Plato and Aristotle The standard of Christian virtue is even more stringent What may ap pear to be virtues are according to Augustine rather vices than virtues so long as there is no reference to God in the matter For although some suppose that virtues which have a refer ence only to themselves and are des red only on their own account are yet true and genuine virtues the fact is that even they are inflated with pride and are therefore to be reckoned vices

The theological virtue of cha ity—the love of God—is held by the theolo ans to be indis pensable to the perfect on of all the other vir tues in a Christian life Not only according to Aquinas do faith and hope lack th perfect character of virtue without ch r ty but all the other virtues are imperfect in its absence

It is possible by means of human works he writes to acquire the moral virtues in so far as they produce good works that are directed to an end not surpassing the natural ability of man And when they are acquired thus they can be without charity even as they were in many of the pagans But in so far as they pro duce good works in relation to a supernatural last end thus they have the character of virtue truly and perfectly and cannot be acquired by human acts but are infused by God Such mor al virtues cannot be without charity Only the infused virtues are perfect and deserve to be called virtues absolutely The other vir tues those namely that are acquired are vir tues in a restricted sense

THAT VIRTUE IS GOOD and vice evil seems to go undisputed in the tradition of the great books even by Machiavelli who bemoans the neces sity of vice in a successful prince But una nimity on this point does not preclude a variety of answers to the question What is the good of virtue?

Is it an end in itself or a means and if a means what end does it serve? Moreover what is the principle of goodness in the virtues? Does it lie in the rule of reason in conformity to na ture in obed ence to the moral law and the im perative of duty in submiss on to God s will? Or are the virtues good only to the extent that they are useful and profitable? To the individ ual alone or to society as well? As these ques tions are differently answered different con *ceptions of virtue appear*

Marcus Aurelius gives the simplest and most familiar answer Virtue is its own reward What more dost thou want the Stoic asks when thou hast done a man a s rvice? Art thou not content that thou hast done someth ng conformable to thy nature and do t thou seek to be paid for it? The virtues are not only self rewarding but they are the only things in which a good man can take delight When thou wishest to delight thyself Aurelius says think of the virtues of those who l ve w th thee For nothing d l ghts so much as the examples of the virtues

Locke seems to make profit or utility the source of goodness in the virtues. God hav

ing by an inseparable connexion joined virtue and public happiness together Locke writes and made the practice thereof necessary to the preservation of society and visibly beneficial to all with whom the virtuous man has to do it is no wonder that everyone should not only allow but recommend and magnify those rules to others from whose observance of them he is sure to reap advantage to himself

The virtue seem to become conventional in Locke s view They are whatever the members of a particular society deem advantageous Virtue and vice are names pretended and supposed everywhere to stand for actions in their nature right and wrong and as far as they are really so applied they are so far co incident with the divine law But yet what ever is pretended Locke adds this is visible that these names virtue and vice in the partic ular instances of their application through the several nations and societies of men in the world are constantly attributed only to such actions as in each country and society are in reputation or discredit Thus the measure of what is everywhere called and esteemed vir tue and vice is the approbation or dislike praise or blame which establishes itself in a society according to the judgment maxims or fashion of that place That this is the common measure of virtue and vice will appear Locke thinks to anyone who considers that though that passes for vice in one country which is counted a virtue or at least not a vice in another yet everywhere virtue and praise vice and blame go together

Hobbes also regards the names of the virtues as inconstant names varying according to the nature disposition and interest of the speaker for one man calleth *wisdom* what another calleth *fear* and one *cruelty* what an other *justice* one *prodigality* what another *magnanimity* Yet this does not prevent Hobbes from proposing a list of virtues which derive their goodness from the natural law All men agree on this he writes that peace is good and therefore also the ways or means of peace which are *justice gratitude modesty equity mercy* and the rest of the Laws of Nature are good that is to say *Moral Virtues* and their contrary *Vices* evil

Moral philosophy according to Hobbes is the science of Virtue and Vice and therefore the true doctrine of the Laws of Nature is the true moral philosophy Though other writers of moral philosophy acknowledge the same virtues and vices Hobbes thinks they do not see wherein consisted their goodness nor that they come to be praised as the means of peaceable sociable and comfortable living

Like Kant he criticizes Aristotle s doctrine of the mean or as Hobbes refers to it the notion that virtue consists in a mediocrity of the passions as if not the cause but the degree of daring made *fortitude* or not the cause but the quantity of a gift made *liberality* The cause of virtue according to Hobbes is the natural law commanding men to do whatever is required for peace and self preservation In terms of a quite different conception of law and duty Kant also says that the difference between virtue and vice cannot be sought in the degree in which certain maxims are followed but only in the specific *quality* of the maxims In other words the vaunted principle of Aristotle that virtue is the *mean* between two vices is false

It is not Kant but Spinoza who seems to bear an affinity to Hobbes in the theory of virtue Both make self preservation the end which determines the direction of virtuous conduct Both consider civil peace or the good of others in relation to self Both draw up lists of moral virtues from their enumeration of the passions Hobbes by reference to natural law Spinoza in terms of adequate ideas of God s nature Spinoza identifies virtue with power and holds that the more each person strives and is able to seek his own profit that is to say to preserve his own being the more virtue does he possess But though he makes the endeavor after self preservation the primary and only foundation of virtue he conceives self preservation itself to have its foundation in knowledge of God

To act in conformity with virtue Spinoza maintains is to act according to the guidance of reason and every effort which we make through reason is an effort to understand and therefore the highest good of those who follow after virtue is to know God that is to say it is a good which is common to all men and can be equally possessed by all in so far as they are of the same nature In direct consequence he

declares that the good which everyone who follows after virtue seeks for himself he will desire for other men and his desire on their be half will be greater in proportion as he has greater knowledge of God

ALL THOSE WHO RELATE virtue to happiness do not do so in the same way The multiplication of happiness writes Mill is according to the utilitarian ethics the object of virtue He at tributes to a very imperfect state of the world s arrangements the fact that anyone can best serve the happiness of others by the absolute sacrifice of his own yet so long as the world is in that imperfect state he goes on to say the readiness to make such a sacrifice is the highest virtue which can be found in man

But Mill repeatedly insists that only an in crease of happiness justifies sacrifice and only its contribution to happiness makes virtue good He criticizes the Stoics for striving to raise themselves above all concern about anything but virtue and for supposing that he who has that has everything No claim of this de scription is made for the virtuous man by the utilitarian doctrine

While admitting that virtue may come to be desired disinterestedly as an ingred ent of hap p ness rather than as a means to it Mill does not regard virtue as a natural and necessary condi tion of happiness Virtue according to the utilitarian doctrine is not naturally and origi nally part of the end but it is capable of becom ing so If there are some who do not desire virtue either because it gives them no pleasure or because the lack of it causes them no pain they can be happy without it

The view taken by Plato and Aristotle seems to be directly contrary All things which have ends appointed by their nature Socrates argues at the beginning of the *R public* must also be capable of virtues or excellences whereby to achieve their ends If happiness is the end of the soul or of human life then we must look to such excellences as the virtue of justice and temperance to provide the means When Gl u con and Adeimantus ask Socrates to prove that only the virtuous man c n be happy he under takes the long analysis of the parts of the soul and the parts of the state to discover the vir tues appropriate to each and to the whole When the virtues are defined Glaucon admits that the question he originally asked has now become ridiculous

The answer to the question is evident as soon as virtue and happiness are seen to be reciprocal notions like cause and effect Yet Aristotle s definition of moral virtue as a habit of choice consisting in a mean—a mean relative to our selves determined by reason or as the prudent man would determine it—does not immediately explain why happiness is defined as the reali zation and perfect exercise of virtue The con nection between virtue as means and happiness as end becomes apparent only in terms of the conception that happiness is the ultimate end *because* it includes all good things and leaves nothing to be desired

As an object of desire as something worth having in itself virtue is only one type of good It does not constitute happiness Happiness according to Aristotle includes as well such bodily and external goods as health and pleasure friendship and wealth But unlike these other goods the virtues alone are capable of produc in happiness because in Aristotle s view they are the causes of our thinking and acting well with respect to all other goods

We do not acquire or preserve virtue by the help of external goods Aristotle says but ex ternal goods by the help of virtue This ap plies to health and pleasures no less than to wealth and friends Because the moral virtues together with prudence direct our desires de termine our choices and govern our actions in accordance with reason s discrimination be tween real and apparent goods the exercise of these habits results in happiness or living well But since external goods are goods of fortune and not entirely within our control Aristotle finds it necessary to qualify the definition of happiness To the statement that the happy man is one who is active in accordance with complete virtue he adds that he is one who is suffic ently equipped with external goods not for some chance period but throughout a complete life

Accord ng to Kant the conn xion of virtue and happ ness may be understood in t o vays either the endeavor to be virtuous and tl e ra tional pursu t of happ ness a not two distinct action but absolutely id ntical or the con

nexion consists in this that virtue produces *happiness as something distinct from the con sciousness of virtue* as a cause produces an ef fect Kant thinks that both the Stoic and Epicurean doctrines choose the first of these alternatives They differ from each other in his opinion only in the way they conceive the identity of virtue and happiness The Epicu rean notion of virtue he writes was already involved in the maxim to promote one s own happiness According to the Stoics on the other hand the feeling of happiness was already con tained in the consciousness of virtue

Kant s own resolution of what he calls the *antinomy of practical reason* seems to depend on his conception of the *summum bonum* For him it is not happiness it consists rather in be ing worthy of happiness through doing one s duty Morality he says is not properly the doctrine how we should *make* ourselves happy but how we should become *worthy* of happi ness Under the moral law to be happy is not a duty but to be worthy of happiness is In Kant s view therefore virtue is related to hap piness through the medium of duty Virtue he declares is a coincidence of the rational will with every duty firmly settled in the charac *ter* It is *the moral strength of a man s will* in his obedience to duty

But in addition to being the will s strength in overcoming obstacles— the natural inclina tions which may come into conflict with the moral purpose —virtue or rather the impera tive which commands the duty of virtue in cludes besides the notion of constraint that of an end Not an end that we have Kant ex *plains but one that* we ought to have an end which therefore pure practical reason has in itself whose highest unconditional end (which however continues to be a duty) con sists in this that virtue is its own end and by deserving well of men is also its own reward

The issue between Kant and Aristotle con cerning the good of virtue as a means or an end involves the whole of their moral philosophy It goes to the central conflict between their fun damental principles which is discussed in the chapters on Duty and Happiness Fundamen tal differences in political philosophy also arise from different views of virtue in relation to the forms of government and the ends of the *state*

The ancients for example define aristocracy in terms of virtue The point is not only that aristocracy is a form of government in which the few who are most virtuous rule it is also that form of government the principle of which is virtue as liberty is the principle of democracy and wealth of oligarchy Montesquieu makes virtue the principle in republican government in contrast to honor as the principle in mon archies and fear in despotism What I distin guish by the name of virtue in a republic he explains is the love of one s country—that is, *the love of equality It is not a moral* nor a Christian but a political virtue and it is the spring which sets republican government in motion as honor is the spring which gives mo tion to monarchy Since for Montesquieu both democracy and aristocracy are forms of republican government the former rests on virtue as much as the latter

Agreeing that the conditions Montesquieu sets for republican government *could not* exist without virtue Rousseau criticizes him for failing to see that the sovereign authority being everywhere the same the same principle *should be found in every well constituted* state in a greater or less degree it is true accordin to the form of government So for Mill virtue defines the aim of good government itself with out respect to particular forms The most im portant point of excellence which any form of government can possess he writes is to pro mote the virtue and intelligence of the people themselves

The virtues which a government *promotes*, however may be those of the good cit zen rather than the good man This distinction be tween civic and moral virtue occupies the an cients *related as it is to the problem of the* vir tuous man living in a bad society—a problem which Socrates actually faces as well as dis cu ses in the *Apology* and the *Crito*

The virtue of the citizen Aristotle writes, must be relative to the constitution of the state of which he is a member Hence it is evident that the good citizen need not of neces sity possess the virtue which makes a good man Yet *in some states* the good man and the good citizen are the same

In this vein Aquinas considering whether the laws should try to make men good says of a tyrannical or unjust law that in so far as it has something of the nature of law its aim is that the citizens be good At least it aims at being obeyed by them and this he adds is to make them good not absolutely but with respect to that particular government But Aquinas also contemplates the need for disobeying a civil ordinance if it demands too great a sacrifice of virtue by requiring the citizen to violate the natural or the d vine law As Rousseau later says a man s duty takes precedence over that of a citizen

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and pa e numbers of the passages referred to For example in 4 HO IER *Iliad* BK II [265 83] 12d the number 4 is the number of the vol me in the set the number 12d ind cates that the pas sage is in section d of page 12

PAGE SECTIONS When the text is printed in one c lumn the letters a and b refer to the upper and lower halves of the pa e For example in 53 JA IES *Psychology* 116a 119b the passa e begins in the upper half of pa e 6 and ends in the lo r half of page 119 When the text is p inted n t o columns the letters a and b refer to the upper and lower hal es of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the page. For example in 7 PLATO *Sympos m* 163b 164c the passage begins in the lowe half of the left hand s de of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S D VISIONS One or more of the main d visions of a work (such as PART BK CH SECT) are sometimes included in the reference line numbers in brackets are given in cer tain cases *e g Il ad* BK II [265 283] 12d

BIBLE REFERENCES The references are to book chapter and verse. When the King James and D ay vers ons diff r in t tle of books or in the numbering of chapters or verses the Ki g James vers n is cited first and the Douay ind cated by a (*D*) follo *e g* OLD T STA MENT *Nehemiah* 7 45—(*D*) *II Esdras* 7 46

SYMBOLS The abbreviation esp calls the reader s attent on to one or mo e especially relevant parts of a whole ref enc passim signifies that the topic is d s u sed intermit t ntly rather than continuou ly in the work or passage cited

For additional nformation concerning the style of the refe ences see the Explanation of Refe en e Style for general gu dance in the use of *The G eat Ideas* consult the P eface

1 D e se conceptions of v rtue

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8 ARI T TLE *C tego ies* CH 8 [8ᵇ 6-34] 13d / *Phys s* BK VI CH 3 [246 10-248 8] 329c 330d

9 AR STOTL *Eth cs* K I H 13 BK II CH 347b-349b BK I CH 3 [1 4ᵇ24 27] 350b H 5-6 351b-352d BK I CH 5 [1114ᵇ 6-30] 360d 361a BK VI 387a 394d X IX C 8 [69ᵃ6-] 422 d / *Politics* BK CH 3 [260ᵃ20- 8] 454d / *Rh tori* BK CH 9 [366 33-ᵇ34] 608d 609b

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12 AURELIUS *Medutat ons* BK II S T 16 259a BK IV ECT 29 266a K V S CT 8 269d 270b BK VI SEC 16 275b d S CT 40-46 277d 278d K VII S CT 1 285a b CT 39 288c BK X CT 1 291a-c SECT 16 293 BK XI S CT 10 303b-c

14 PLUTARCH *C riolanus* 174b d 175a / *Aris tides* 265c d / *Demetrius* 726a b

17 PLOTINUS *First E ead* TR II 6b 10a TR VI CH 6 24a c TR VIII CH 8 31c CH 32a 33a / *Second Enn ad* TR IX CH 15 74d 75b / *Th rd Ennead* TR VI CH 2 107a 108 / *S xth En ad* TR V I CH 5-6 344d 345d

18 AUGUSTIN *C nf s ions* BK III par 13 17 16c 18a / *City of God* BK XIV CH 6-9 380b 385b esp CH 9 383d K XV CH 22 416a c BK X X CH 4 511d CH 10 516c d I 12 517b 519a CH 25 528c d / *Christian D ct i e* K I CH 27 631d

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20 AQUINAS *Summa Th logica* P RT I II Q 54 A 3 24 25b Q 55 26a 29d Q 56 A 6 34b 35 Q 63 A 2 64b 65a Q 71 AA 3 105d 108b P RT I II Q 31 A 3 ANS 538b 539c

23 HO ES *Leviatha* PART I 62c 63d 66c 68b p ss m 92 d 96 b

25 MO T IGN *E ys* 28a d 71 72b 183 200d 205b 389c 390b 391b c

26 SH K EARE *Romeo a d J l t* A T II SC III [3] 296b-c

30 B ON *Adv ncement of Le n g* 78d 79a 80b-81a

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31 SPINOZA *Ethi s* PART III 395a d PART IV 422b d-450d esp DEF 8 424b c PROP 18 SCHOL 429a d PRO 22 25 430b 431a PROP 36-37 434a-436a PART V PROP 42 463b d

3? MILTON *Comus* 33a 56b esp [589-609] 46b-47a / *A eopag tica* 390a b

33 PASCAL *Pensees* 352-360 234b 235a 502 260b 261a

35 LOCKE *Human Understand ng* 90a d BK I CH II SECT 5-6 105a c SECT 18 109c d BK II CH XXVIII SECT 10 I 230b 231c

36 S VIFT *Gull er* PART IV 165a 166a

37 FIELDING *Tom Jones* 38c 39c 316a c

42 KANT *Pur Reason* 173b 174a / *Fund Pr n Metaphysic of Morals* 256a b 257c d 270d 271 esp 271b [fn 1] 273d 277b esp 275b / *Pract cal Reason* 303b 304d esp 304a 326b-327c 339b d 358c / *Pref Metaphys cal Elements of Ethics* 366d 369a esp 368d 371c 372a 373b d 376c 379b esp 377b-c

43 MILL *Liberty* 303b 305b / *Util tarian sm* 462a-463b

46 HEGEL *Philosophy of R ght* PART III par 150 56c 57a

51 TOLSTOY *War and Pea e* BK V 198b 203a esp 200c 202d

53 JAMES *Psychology* 81b 83b

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8 AR STOTLE *Prio Analytics* BK II CH 25 [69 0-28] 91a / *Topics* BK II C 9 [114b6-13] 160b BK III CH 6 [120 26-31] 168a

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12 AURELIUS *Med tations* BK VII SECT 6 -63 283d 284a BK XII SECT 12 308b-c

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35 BERKELEY *Human Knowledge* SECT 100 432b c

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37 FIELDING *Tom Jones* 182a-c

38 ROUSSEAU *Inequality* 345a c

42 KANT *Pu e Reason* 149d / *Fund Prn Metaphysic of Morals* 260d 261d 282b 283d / *P act cal Reason* 358c / *Pref Metaphysical Elements of Ethics* 368c 369a

46 H GEL *Philosophy of Right* PART II par 139-140 48d 54a passim / *Philosophy of History* ART II 280b 281b

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1b The un ty of virtue and the plurality of v rt es

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17 PLOTINUS *Fi t Enne d* TR II CH 7 9 10a TR III CH 6 11d 12b / *Seco d E n d* TR IX CH 15 74d 75b
18 A GUSTINE *C fess ons* K IV par 24 25b c
20 AQ INAS *Summa Th logica* PART I I Q 60 1 49d 50c Q 61 AA 3 4 56b 58b Q 65 A I ANS 70b-72a Q 68 A 5 92c 93 Q 73 A I 119c 120c PART II II Q -3 A 8 488d 489c
25 MONTAIGN *Essays* 204c d
30 BACON *Advancem nt of Lear ng* 80b 81a
33 P C L *Pens es* 20 175a
42 KAN *Pref Met physical Element f Ethics* 368c d 373b d 377d
43 M LL *Util ian sm* 469a b
46 HEGEL *Philosophy of Right* PART I par 96 36c 37a

1 The doctrine of virtue as a mean between th ext emes of vice

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9 ARI TOTLE *Eth* K I CH 2 [4 10-26] 349c d CH 6-9 351c 355a c K I C 15 [I 3b 3-6] 359c BK III CH 6-BK V CH II 361a 387a c K VI CH I [1138b16-34] 387a b / *Politics* K IV CH II [29 35 38] 495c / *Rhetoric* BK I CH 9 [1367 36-b7] 610a b
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14 PLUTAR H *Cor la us* 174b d 175a
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21 DANT *Di ne C medy* ELL V I [66] 9c 10b PUR ATORY XVII [9-)4] 86 87a
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23 HO ES *Levi th n* ART I 96b
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29 C RV NTES *Do Qui t* ART II 256d 291d 362b
30 BA ON *Ad nc m t f Lea ing* 79b 81
31 D S RT S *D s* PAR 48b-49d
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33 P S AL *Pens s* 350-36 234a 235a 378 238a
38 MON SQU U *Sp rit f Law* K XX X 262a
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46 HEG L *Ph l ophy f Right* RT par 5 56d 57a

1d Virtue as an intrins c good its relation to h pp ness

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9 AR TOTLE *Ethics* K I CH 7 9 342c 345c CH 13 347b 348d BK IX CH 9 423a-424b BK X CH 6-8 430d 434a / *Pol t cs* BK II CH 9 [271b -9] 467d BK IV CH II [1295 3) 38] 495c BK VII CH I-3 527a 530a CH 8 [1328 37 b2] 532d CH 9 [3 8b35-36] 533b CH 13 [1331b24-1332 28] 536b 537a / *Rhetor* BK I CH 5 [36 b4 30] 600d 601b CH 6 [136 b 5] [1362b10-14] 603b CH 9 [366 33-b34] 608d 609b
12 E CTETUS *Dis ou ses* BK I CH 4 108d 110a BK II CH 10 149c 150a BK III CH 24 206c 210a BK IV CH 7 233a d
12 AUR L U *Med tat o s* BK III SECT 12 262b c BK V S CT 34 273c BK IX S CT 4 292a S CT 42 295 296a c
14 P UT CH *Ar st d s* 265 d
17 PLOTINUS *F st Ennead* TR I CH 3 4 7c 8c TR IV H 9 16c 17a / *S c d Enn ad* TR IX H 5 74d 75b
18 AUGUSTINE *C ty of God* K VIII CH 8-9 270a 271a K XIX CH I 4 507 513
19 AQU N S *Summa Th l gica* P RT I II Q 2 A 2 616d 617b A 4 618a d
20 AQUINAS *Summa Th l gica* P RT I II Q 55 26 29d PART I I Q 8 A 2 608 609
25 M NTA GNE *Ess ys* 28a d 71a 72b 301d 302d 389c 390b
27 SHAK E R *All Well Th t E d Well* ACT I SC III [4 153] 152d 153a
29 C RVANTES *D n Quixot* P RT II 222b d
31 S NOZA *Eth c* PART IV PRO 19-28 429d 431c PART V ROP 4 463b d
32 MILTON *Comus* 33 56b
35 LOCK *Human Understa d g* K I CH II T 5-6 105
36 ST RN *Tr st am Shandy* 538b
37 F DING *T m J es* 316a c
42 KANT *Pure R o* 234 240b esp 235a b 238 239a / *F d Prin M t phy ic f M ls* 253 287d esp 256 257d 258d 261 264 267b d 282b 283d 286 c / *P a t l Re son* 291 361d esp 297a 314d 325 327d 329a 331 339a d 340 342d 344c 347d / *P f M t phys al Element f Eth* 365a 379d e p 365b 366d 369 373b 374a c / *I t Met phys f Mo als* 387b 388 / *Judgement* 478a 479d 584d 587a 588b [fn] 591b-592 594c 596c
43 MI L *Ut l t m* 445 -464d esp 452 453 461 -464d
49 D RW N *D cent f M* 316 317 592d 593
51 TO TOY *Wa d P* K V 214 215b

(1 *Diverse conceptions of virtue: virtue as an intrinsic good; its relation to happiness*)

52 DOSTOEVSKY *Brothers Karamazov* BK II 26a-27d; BK VI 146b-d; 170d

54 FREUD *Civilization and Its Discontents* 793a-794a

1e The distinction between virtue and continence: the consequences of the theory of virtue as habit

8 ARISTOTLE *Topics* BK IV, CH 5 [125b20-28] 174d-175a

9 ARISTOTLE *Ethics* BK II, CH I 348b-d; 349b; BK IV, CH 9 [1128b34-35] 376c; BK VII, CH I-10 395a-403

19 AQUINAS *Summa Theologica* PART I, Q 95, A 3, REP 4 508a-509b

20 AQUINAS *Summa Theologica* PART I-II, Q 55 26a-29d; Q 58, A 3, REP 2 43b-44a; Q 109, A 10, ANS 347a-d; PART III, Q 7, A 2, REP 3 746c-747b

21 DANTE *Divine Comedy*, HELL, XI [79-90] 15d-16a

25 MONTAIGNE *Essays* 200d-204d esp 203a-b; 494d-495a

27 SHAKESPEARE *Hamlet*, ACT III, SC IV [160-170] 56b

37 FIELDING *Tom Jones* 122d-123a

42 KANT *Pref. Metaphysical Elements of Ethics* 368d; 378a-b

43 MILL *Utilitarianism* 464b-c

44 BOSWELL *Johnson* 375b-c

49 DARWIN *Descent of Man* 311c

53 JAMES *Psychology* 81b-83b

2 The classification of the virtues: the correlative vices

7 PLATO *Republic*, BK IV 346a-355c / *Laws*, BK I 643c

9 ARISTOTLE *Ethics* BK I, CH 13; BK II, CH 9 347b-355a; BK III, CH 5 [1115a3]; BK VI, CH 13 [1145a14] 361a-394d

17 PLOTINUS *First Ennead*, TR II, CH I-2 3 7b-8a

20 AQUINAS *Summa Theologica* PART I-II, QQ 57-6 35a-63a

21 DANTE *Divine Comedy* esp HELL, X 15a-16b; PURGATORY, XVII [82-139] 79b-d; PARADISE, IV [28-63] 111a-b

23 HOBBES *Leviathan*, PART I 62c-63d

31 SPINOZA *Ethics*, PART IV, PROP 41-73 437a-447a

2a The division of virtues according to the parts or powers of the soul: the distinction between moral and intellectual virtue: the theory of the cardinal virtues

7 PLATO *Republic*, BK IV 346a-355a; BK VII 390a / *Laws*, BK I 643c

8 ARISTOTLE *Physics*, BK VII, CH 3 [246a10-248a8] 329c-330d

9 ARISTOTLE *Ethics* BK I, CH 13 347b-348d; BK II, CH I [1103a14-18] 348b; BK VI, CH I-2 387a-388b; CH 12 [1144a1-11] 393c-d; CH 13 394b-d; BK X, CH 8 [1178a8-b8] 432d-433b / *Politics*, BK VII, CH 14 [1333a16-30] 538a; CH 15 [1334b8-28] 539b-d; BK VIII, CH 2 [1337b33]-542b-c

17 PLOTINUS *First Ennead*, TR II, CH 2-3 7b-8a; TR III, CH 6 11d-12b

18 AUGUSTINE *City of God*, BK V, CH 20 225b-226a; BK XIX, CH 4 511a-513c

19 AQUINAS *Summa Theologica* PART I, Q 113, A I, REP 2 576a-d

20 AQUINAS *Summa Theologica* PART I-II, Q 51, A 3 14b-15a; Q 53, A I, ANS and REP 3 19d-21a; Q 56 29d-35a; Q 58 41a-45c; Q 61 54d-59d; Q 65, A I 70b-72a; Q 68, A 8 95c-96c; PART II-II, PROLOGUE 379a-b

2a(1) Enumeration and description of the moral virtues

8 ARISTOTLE *Physics*, BK VII, CH 3 [246b20-247a19] 330a-b

9 ARISTOTLE *Ethics* BK I, CH 13 [1103a3-10] 348c-d; BK II, CH 7-8 352d-354d; BK III, CH 5 [1115a3]; BK V, CH 11 [1138b15] 361a-387a-c / *Politics*, BK I, CH 13 [1260a20-28] 454d / *Rhetoric*, BK I, CH 9 [1366b1-22] 608d-609a

12 AURELIUS *Meditations*, BK III, SECT 6 26a-c; SECT 11 262a-b; BK V, SECT 5 269b; SECT 12 271; BK VIII, SECT 39 288c

17 PLOTINUS *First Ennead*, TR II, CH 6-7 9b-10a

18 AUGUSTINE *City of God*, BK XIX, CH 4 511a-513c; CH 20 523d-524a

19 AQUINAS *Summa Theologica* PART I, Q 113, A I, REP 2 576a-d

20 AQUINAS *Summa Theologica* PART I-II, Q 60 49d-54d; Q 64, AA I-2 66d-68b

27 SHAKESPEARE *Macbeth*, ACT IV, SC III [91-100] 304b-c

31 SPINOZA *Ethics*, PART IV, PROP 41-72 437a-446c

36 SWIFT *Gulliver*, PART IV 165b-166a

42 KANT *Fund. Prin. Metaphysic of Morals* 256a-b / *Pref. Metaphysical Elements of Ethics* 368b-369a

51 TOLSTOY *War and Peace*, BK V 200c-d

2a(2) Enumeration and description of the intellectual virtues

8 ARISTOTLE *Physics*, BK VII, CH 3 [247b1-248a8] 330b-d

9 ARISTOTLE *Ethics* BK I, CH 13 [1103a3-10] 348c-d; BK VI 387a-394d

19 AQUINAS *Summa Theologica* PART I, Q 14, A I, REP 2 75d-76c

20 AQUINAS *Summa Theologica* PART I-II, Q 4, A 4 9a-10b; Q 57 35a-41a; Q 64, A 3 68b-69b

23 HOBBES *Leviathan*, PART I 66c-71b

31 SPINOZA *Ethics*, PART IV, PROP 25-28 430d-431

The d st nction between n tur l and super natural virtues

8 AUGUSTINE City of God BK XIX CI 4 513b-c

0 AQU AS Sumrna Tl eolog ca P RT I II Q 51 A 4 15a d Q 55 A 4 ANS and REP 6 28c 29d Q 62 AA I 2 60a 61b Q 63 A 2 AN and REP 2 64b-65a AA 3 4 65 66c Q 68 AA I 2 87c 90c A 8 95c 96c PART II II PROLOGUE 379 b

3 HOBBES Leviathan PART I 149c d

The appearances of virtue imperfect or cond t on l virtues the counte fe ts of virtue natural or temperamental dispo s tions wh ch simulate virtue

6 HERODOTUS H t ry BK IX 303c 304a

7 PLATO Pha do 225d 226c

9 AR TOTLE Eth s BK IV CH 9 375d 376 c K VI CH 12 [1144 11]-CH 13 [1145a2] 393d 394d K VII CH 10 [1152 8 4] 403 b / Rhetori BK I C 19 [1367 36-b7] 610a b

20 AQUINA S mma Th ologica I ART I II Q 51 I NS 12b 13 Q 63 A I 63a 64a Q 65 A I E I 70b 72a PART II I Q 23 A 7 ANS 487d 488d

23 Ho ES Leviathan PART I 68a

25 MONT GNE Essays 103c 104d 160c 161 200d 204d esp 203a b 336c 394a 395b 494d 495a

29 C RVANTES Don Qu xote P RT I 391b d

40 GIB N D cline a d Fall 435b d 534c

42 KANT Pu Reaso 169b [fn 1] / F d P i Met phy of Morals 256a b 258b / Prac tical Reason 325c 327a / Pr f Metaphysical Elements f Ethics 68d 369a

44 Bo W LL Johnson 126a b

54 FR L W ar and Death 759b c

The order and connect on of the v rtues

a Th equality and inequal ty of the tues the h erarchy of irtue and the d gree of ic

7 P AT Prot gora 48a 50d / R publ BK IV 346 355a / Stat na 605d 608d / Lat s K I 643 652d p 643b d K III 674a b BK X 795c 796b

8 ARIS O E T p s BK CH [1 7 26-b2] 164a [118 6-17] 165a

9 ARI TOTLE Et c BK IV CH 3 [1 23b28-1 24 4] 370d BK V [129b25 113 13] 377b-c BK VI CH 7 390a d passim C I 2 13 393b-394d BK X H 6-8 430d 434 / Polit s BK II, CH 9 [71b1-9] 467d BK III CH 7 [279 40-b] 476d

12 AURE IU M dit t ns BK V I SECT 39 288c K XI E T 10 303b

17 P OTINUS F t E e d TR I CH 2 3 7b 8a C I 7 9c 10a TR III C 6 11d 12b

18 AUGUSTINE City of God BK XIX CH 20 524a / Chri tian Doctrine BK III CH 10 662a

20 AQUIN S Summa Th ologica PART I II Q 61 AA 3 4 56b 58b Q 62 A 4 62b-63a Q 66 75b 81b Q 68 AA 7-8 94c 96c PART II II Q 4 A 7 407d-409a

21 D NTE Divine C medy esp HELL XI 15a 16b PUR TO Y XVII [82 139] 79b d PARADI E IV [8-63] 111a b

25 MONTAIGNE Essays 162c 163a 183a c 200d 205b

27 SH KESPEARE Coriol nus ACT II SC II [86-91] 365a

31 S INOZ Ethics PART IV PRO 19-28 429d 431c esp PROP 22 430b c PROP 28 431c

33 PA CAL P n ees 102 192b

42 KANT P ef Metaphysical Elements of Ethi s 368c d

43 MI L Utili a ianism 473c-476a c

44 BOSW LL J h 251a

49 DARWIN Descent of M n 314c 316a

51 TOLSTOY W ar and Pea e BK V 200 202d BK VI 246a d

3b The ndependence or nterdependence of the virtues

OLD TESTAM NT Proverbs 8.20 10 31 15.2 28 I

APOCRYPH Wi dom of Solomon I 4-6—(D) OT Book of W sd m I 4-6

NEW T STAM ENT Galatians 5 22-23 / II P ter I 3-9

7 PLATO Prot gor s 48b 50b / Meno 183d 184 / Rep blic K V 350a 355 / Statesman 605d 608d / Law BK I 642 646a BK I I 674a b BK X 795c 796b

9 A ISTOTL Ethics K IV CH 3 [23b-8 1124 4] 370d BK VI CH 5 389a c CH 7 390a d passim CH 13 394b d BK VII CH I [1152a7 8] 403a

12 AURELIUS M d ta ons BK IX SECT I 291 -c

17 PLOT NU First E e d TR II CH 6 11d 12b

18 AUGU TINE C ty of God K XIX CH 20 524a

20 AQU NA Summa Theologica PART I-II Q 56 A R 3 30 31a Q 57 A 5 39a 40a Q 58 A REP 2 3 42a 43 AA 4-5 44a-45d Q 65 70a 75a Q 68 A 5 92 93c P R II II Q 18 A 617d 618c

25 MONTA GNE Es ay 204c d

29 C R ANT S Don Q te PART 256c d 291d

31 S INOZA Ethics PART IV PROP 19- 4 429d 430d

32 MI TON C mus [331 489] 40b 44a / P ad se L t BK IX [335 339] 254b

40 G BON D cline a d Fall 534c

42 KANT Pref Met phy l Element f Eth s 368c d 377d

43 M Ut l t n sm 469a b

44 BOSWELL Johns n 160b 251a

4 The natural causes or conditions of virtue

4a Natural endowments temperamental dispositions toward virtue or vice the seeds or nurseries of virtue

5 EURIPIDES *Hecuba* [582-603] 357d 358a / *Iphigenia at Aulis* [543-572] 429d-430a
6 THUCYDIDES *Peloponnesian War* BK II 396d 397a
7 PLATO *Protagoras* 46d 47b 59a / *Meno* 174a 190a c esp 184b c 190 c / *Republic* BK VII 389d 390b / *Timaeus* 474c d / *Statesman* 607b 608d
9 ARISTOTLE *Ethics* BK II CH I [1103ª14-ᵇ2] 348b d 349a BK VI CH II [1143ᵇ7 13] 393a CH 13 [1144ᵇ1 1145ª2] 394b d BK X CH 9 [1179ᵇ33 ᵇ26] 434a c / *Politics* BK II CH 5 458a 460a esp [1263ª38 ᵇ26] 458c d BK VII CH 13 [1332ª39-ᵇ10] 537a b CH 15 [1334ᵇ8-28] 539b-d
14 PLUTARCH *Alcibiades* 156c d / *Coriolanus* 174b d 175a / *Demetrius* 726c
17 PLOTINUS *First Ennead* TR III CH I 3 10a 11a
20 AQUINAS *Summa Theologica* PART I II Q 51 A I 12b 13c Q 63 A I 63a 64a A 2 REP 3 64b-65a A 3 ANS and REP 3 65a d Q 94 A 3 223a c
21 DANTE *Divine Comedy* PURGATORY VII [112 123] 63d 64a XVII [91 105] 79b c XXX [109-145] 100c d PARADISE VIII [91 148] 117d 118c
22 CHAUCER *Tale of Wife of Bath* [6691-6788] 274b 276a
23 HOBBES *Leviathan* PART I 86b 96a b
25 MONTAIGNE *Essays* 43a c 200d 204d 264b 265a 307c 308a 337b c 381b c 391c 392a
27 SHAKESPEARE *Hamlet* ACT I SC IV [23 37] 36a b / *All's Well That End Well* ACT I SC I [70-81] 143 ACT II SC III [124 151] 152d 153a
28 HARVEY *On Animal Generation* 455d-456a
30 BACON *Advancement of Learning* 69d 70 76d 78d
31 SPINOZA *Ethics* PART V PROP 4 SCHOL 453b d
38 ROUSSEAU *Inequality* 330d 331c 333c d 337d 338c 343 345c 362a d / *Political Economy* 375d 376b
40 GIBBON *Decline and Fall* 192b
42 KANT *Fund Prin Metaphysic of Morals* 263d 264a / *Practical Reason* 303b 304b / *Judgement* 521c 523c
43 MILL *Representative Government* 367d 368a / *Utilitarianism* 459c 460a 469b 470c
44 BOSWELL *Johnson* 413a b
46 HEGEL *Philosophy of Right* PART III par 150 56c 57a ADDITIONS 96 132
49 DARWIN *Descent of Man* 310a d 318a c
52 DOSTOEVSKY *Brothers Karamazov* BK II 19d 20b 38d-40c BK II 53b 54b
53 JAMES *Psychology* 886b 888a
54 FREUD *War and Death* 757d 758a 758d 759a

4b The role of teaching in the spheres of moral and intellectual virtue

OLD TESTAMENT *Proverbs* 4 1 4 10-11 5 7 13 6 23 10 17 13 1 15 5
APOCRYPHA *Ecclesiasticus* 7 23 30 3—(D) OT *Ecclesiasticus* 7 25 30 3
NEW TESTAMENT *II Timothy* 3 16 / *Titus* 2 1 3.2
5 EURIPIDES *Suppliants* [838-917] 265d 266b / *Hecuba* [582-603] 357d 358a / *Iphigenia at Aulis* [543-572] 429d-430a
5 ARISTOPHANES *Clouds* 488a 506d esp [882 1104] 499b 502a
7 PLATO *Laches* 26a 37d esp 30a b / *Protagoras* 38a 64d esp 43a 47c 64a d / *Euthydemus* 65a 84a c / *Symposium* 169c 170a / *Meno* 174a 190a c esp 183b 190a c / *Gorgias* 258b-259c 290b 291a / *Republic* BK II IV 320c 355a BK VII 388a 401d esp 389d 398c / *Timaeus* 474c d / *Sophist* 556c 558d / *Statesman* 605d 608d / *Laws* BK I 649b d BK II 657c 658b BK V 688c-689c BK VII 796b 799a / *Seventh Letter* 801c 802d 809c 810d esp 810c d
9 ARISTOTLE *Ethics* BK I CH 4 [1095ᵇ4 13] 340c d CH 9 345 -c BK II CH I [1103ª14 ᵇ1] 348b CH 4 350d 351b BK X CH 9 [1179ᵇ33 1180ᵇ24] 434a 435c / *Politics* BK II CH 7 [1266ᵇ27 36] 462b c BK IV CH II [1295ᵇ14 18] 495d BK VII CH 13 [1332ª39-ᵇ10] 537a b CH 15 [1334ᵇ8 28] 539b d BK VIII 542a 548a c esp CH 2 542b d
12 EPICTETUS *Discourses* BK I CH 4 108d 110a BK III CH I 175a 177c
14 PLUTARCH *Pericles* 121a 122b / *Alcibiades* 156c 158b / *Coriolanus* 174d 175a / *Timoleon* 195a b / *Cato the Younger* 623a b / *Demetrius* 726a d / *Dion* 782c 788b
17 PLOTINUS *First Ennead* TR III CH 2 10d
18 AUGUSTINE *Christian Doctrine* BK IV CH 27 30 696 697d
20 AQUINAS *Summa Theologica* PART I II Q 95 A I ANS 226c 227c A 3 228c 229b
23 HOBBES *Leviathan* PART I 66c d 68b
25 MONTAIGNE *Essays* 43a c 55d 62a esp 60c 61c 69d 72b 321a c 391c 392a
30 BACON *Advancement of Learning* 69d 70a
31 SPINOZA *Ethics* PART IV APPENDIX IX 448a
36 STERNE *Tristram Shandy* 250b-251a
38 ROUSSEAU *Inequality* 326c d 345b-c / *Political Economy* 373 374 375d 376b
40 GIBBON *Decline and Fall* 34d 338d 339a 435b d
42 KANT *Fund Prin Metaphysic of Morals* 260d 261d 263a b 264b [fn 1] 278a b / *Pref Practical Reason* 327 d 356c 360d / *Pref Metaphysical Elements of Ethics* 365b d 377a / *Intro Metaphysic of Morals* 387d 388 / *Judgement* 513d 514b
43 MILL *Utilitarianism* 456a b 457c-461c passim
44 BOSWELL *Johnson* 413 b

46 H GEL *Philosophy of Right* PART III par 187 65a-c ADDITIONS 97 132c 133a
49 D RWIN *Descent of Man* 593a
51 TOLSTOY *War and Peace* BK I 47b-48d BK VI 244d 245d
52 DO TOEVSKY *Brothers Karamazov* BK IV 83 88a passim EPILOGUE 411b-412d
53 JAMES *Psych logy* 274b 275a
54 FREUD *Sexu l Enl ghtenment f Children* 122a c / *General I troduct on* 573c 574b 592b-c / *New I troduct ry Lectures* 870a-c

4c Training or pract ce as cause of virtue or vice the p ocess of h bit formation

OLD TESTAM NT *Pr erbs* 2 6 / *Jeremiah* 13 23—(D) *Jerem s* 13–3
A OCRYPHA *Ecclesiasticus* 3 8—(D) OT *Eccle siasticus* 30 8
5 EUR ID *Suppliants* [838-917] 265d 266b / *Electra* [367-395] 330c d / *Iph genia at Aul s* [543-572] 429d-430a
7 PLATO *Meno* 1 4a 190a c esp 174a 190a / *Republic* BK I I 329c 331 BK VII 389d 390b 391c d / *Timaet s* 474d-475d / *Th ete tus* 518b / *La us* BK I 649b d BK II 653a-c 657c 658b
8 A ISTOTLE *C tegor* CH o [13 16-3] 18d
9 ARISTOTLE *Ethics* BK I CH 4 [95b4-13] 340c d CH 9 345a-c BK II H I 348b d 349b CH 2 [1104a26-b3] 349d 350a CH 4 350d 351b K V CH 5 [1140b 1- 9] 389b-c C II [1143b7- 3] 393a BK VII CH 10 [1 5 25 33] 403b BK IX CH 9 [117 4 2] 423d BK X CH 9 [1179 33 8 b24] 434a 435c / *Politics* K VII CH 13 [332 39-b1] 537 b CH 15 [1334b8 28] 539b d BK VIII CH I [1337a19-21] 542b
12 E I TETUS *D our* BK I CH 2 106d 108b BK I H 18 161a 162b K I I CH 2 187b 188b K IV CH 9 238c d
12 AUREL L *M d tation* K V SECT 6 271 d
20 AQUIN S *Summa Theolog ca* PAR II Q 5 AA 2 3 13c 15a Q 63 A 64b 65a Q 71 A 4 ANS 108b 109a
23 HO BE *Lev athan* PART I 66 d
25 MONTAIGNE *E ay* 43a c 176c 177a 200d 205b esp 202d 203a 390b 393a
27 SHAKE ARE *Hamlet* ACT I SC IV [140 7] 56a b
29 CERVANTES *D n Q xote* PART I 332
30 BA ON *Ad an ement f Le rning* 69d 70a 78d 81c
35 LOCKE *Hum n Understand g* BK II CH XX S CT 71 197b 198a
42 KANT *Pra tical Rea n* 327a d / *P f M ta physic l Element f Eth s* 368d 374 / *Judgement* 513d 514b
43 M L *Liberty* 294d 295 / *Ut lit a ism* 449c-450a
46 HEG L *Phil phy f Right* P RT par 50-152 56c 57b ADD T ON 96-97 132 133a

49 D RWIN *De cent of Man* 305a 311c d 313d 314a 318a 322a
51 TOLSTOY *W r and Pea e* BK I 47b 48d BK IX 369c d
53 JAMES *P ychol gy* 78b 83b esp 81b 83b 433a-434a 711b 712a 751b 752a

4d The role of the family and the state in the de elopment of moral virt e

4d(1) The infl ence of parental authority on the format on of character

OLD TESTAMENT *Exod s* 12–4 27 / *Deuter onomy* 4 9-10 6 6-7 11 18-19 / *Proverbs* 1 8-9 3 1 4 1 13 6:20-24 13 1 24 15 5 19 18 22 15 23 13 24 34 29 15 17
APOCRYPHA *Tob t* 4 1 19—(D) OT *Tobias* 4 1-2 / *Ecclesiasticus* 7:23-24 30 1 13—(D) OT *Ecclesiast c s* 7:25 6 30 1 13
NEW T STA ENT *Ephesians* 6 4 / *Col ssians* 3:21 / *I Thessalonians* 11 / *Hebrew s* 12:7-9
5 EU IPIDES *Suppliants* [838-917] 265d 266b
7 PLATO *Lache* 26a 30c / *Protagoras* 45d-47a / *Meno* 186a 187b / *Republic* BK V 366a-c / *Laws* BK V 687d 688a BK IX 745d 746a
9 A TOTLE *Eth s* BK X CH 9 [1180 14 b12] 434d 435b / *Politics* BK I CH 13 454a-455a c passim esp [1 60b8 19] 455c BK IV CH II [1295b14 18] 495d BK VII CH 17 [1336a23 b3] 541b c
12 AURELIU *Meditati ns* BK I 253 256d esp S T 7-9 253b 254a SECT II 254b SECT 14-6 254b-255d
13 VIRGIL *Aen id* K V [701 748] 205b-206b
14 PLUTAR H *Marcus Cato* 286c 287b
18 AUGU TINE *Co fe sions* BK I par 14 15 4c 5 K II par –8 9b 10d BK III par 19-20 18b 19a BK IX par 19-22 67a d
20 AQUINAS *Sum ma Theologica* P RT I II Q 95 A ANS 226c 227c Q I 5 A 4 ANS 318b 321a
22 CHAUCER *Physician s Tale* [12 006–036] 367b 368a
25 MONTAIGN *Essays* 16c d 43a-c 63d 64d 66c 67 184a 187d 414 d
29 CERVANTES *Do Qu xote* PART II 251b
31 S INO A *Eth s* PART III PRO 55 CHOL 413b d DEF 27 XPL 419a b
35 LOCKE *C l Government* CH VI CT 55-69 36 40b pass m
36 SWIFT *G lliver* RT I 29b 31a PART IV 166b
38 MONTESQU U *Spirit of Laws* BK IV 15c BK 22d 23
38 ROUSS AU *In qual ty* 326c d 327c 328 / *P l t cal Economy* 376b 377a
39 S TH *W lth f N ti ns* K V 337c d
42 KANT *Scien f Right* 420b 4 1
44 BO ELL *J h n* 199d 200d 314b d 372c
46 HEG L *Ph l phy f R ght* RT I I pa 173 175 61a d p r 39 76d ADDITION 134d 135 47 140c

(*4d The role of the family and the state in the development of moral virtue* *4d(1) The influence of parental authority on the formation of character*)

52 DOSTOEVSKY *Brothers Karamazov* BK XII 369a-373c passim 395a-398d passim

54 FREUD *Origin and Development of Psycho-Analysis* 17d-18a / *Narcissism* 408b / *Ego and Id* 704d-707d / *Civilization and Its Discontents* 794c-795a esp 795b [fn 2] / *New Introductory Lectures* 834b-c 844b-c 876c

4d(2) The moral use of rewards and punishments: the role of precept and counsel, praise and blame

OLD TESTAMENT: *Psalms* 94:10-13; 141:5—(D) *Psalms* 93:10-13; 140:5 / *Proverbs* 1:8; 9:20-33; 3:12; 4:1-4; 5:7-13; 6:23; 9:7-8; 10:17; 13:1; 18:24; 15:5,10,12,31-32; 17:10; 19:18,25; 20:30; 22:15; 23:13-14; 25:12; 29:15,17 / *Isaiah* 28:7-13—(D) *Isaias* 28:7-13

APOCRYPHA: *Wisdom of Solomon* 12:25-26—(D) OT, *Book of Wisdom* 12:25-26 / *Ecclesiasticus* 7:23; 19:13-14; 30:1-13—(D) OT, *Ecclesiasticus* 7:25; 19:13-14; 30:1-13

NEW TESTAMENT: *Luke* 17:3 / *Ephesians* 5:11-13 / *I Thessalonians* 2:11-13 / *I Timothy* 4:13; 5:1, 20 / *II Timothy* 3:16; 4:2 / *Titus* 2 / *Hebrews* 3:13; 10:24-25; 12:5-11

5 AESCHYLUS: *Eumenides* [490-565] 86b-87a; [681-710] 88b-c

5 SOPHOCLES: *Antigone* [1348-1353] 142d

5 ARISTOPHANES: *Clouds* [1303-1464] 504b-506c

6 THUCYDIDES: *Peloponnesian War*, BK II, 399a; 400d-401a

7 PLATO: *Protagoras*, 45b-d / *Gorgias*, 283b-285a / *Republic*, BK II, 313b-d; BK IX, 426d-427a / *Laws*, BK I, 643d; BK V, 688c-689a; BK IX, 745a-746a; BK X, 760d-761b

9 ARISTOTLE: *Ethics*, BK II, CH 3 [1104^b14-18] 350a; BK III, CH 5 [1113^b21-1114^a2] 359d-360a; BK X, CH 9 [1179^b4-1180^a24] 434b-435a

14 PLUTARCH: *Lycurgus*, 41a-42b; 45c / *Lysander*, 354d

15 TACITUS: *Annals*, BK III, 57d-58b

18 AUGUSTINE: *Confessions*, BK I, par 14-16 4c-5b; par 19-23 5d-7a / *City of God*, BK XIX, CH 15-16 521a-522a

19 AQUINAS: *Summa Theologica*, PART I, Q 48, A 6, CONTRARY and REP 1 264a-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, A 2, REP 1 186c-187b; Q 92, A 2, REP 4 214d-215a; Q 95, A 1 226c-227c

22 CHAUCER: *Tale of Melibeus* 401a-432a esp par 62-68 427b-429a

23 HOBBES: *Leviathan*, PART II, 141a-b

25 MONTAIGNE: *Essays*, 16c-d; 43a-c; 66c; 73c-74a; 181d-183a; 184d-185d; 300c-306d esp 306a-c

30 BACON: *Advancement of Learning*, 69d-70a; 79b-c

31 SPINOZA: *Ethics*, PART III, DEF 27, EXPL 419a-b

35 LOCKE: *Human Understanding*, BK I, CH II, SECT 5-6 105a-c; SECT 13 107d-108c; BK II, CH XXVIII, SECT 5-12 229c-231c passim esp SECT 6 229d

36 SWIFT: *Gulliver*, PART I, 28b

37 FIELDING: *Tom Jones*, 41a-c

38 MONTESQUIEU: *Spirit of Laws*, BK VI, 37d-38b; 39c-40c; BK VII, 47c-d; BK XII, 86b; BK XIX, 139c

38 ROUSSEAU: *Inequality*, 360b-361a / *Political Economy*, 372b-373b; 376c-377a / *Social Contract*, BK IV, 434b-435a

40 GIBBON: *Decline and Fall*, 92a-b

42 KANT: *Fund. Prin. Metaphysic of Morals*, 264b [fn 1]; 270d-271a / *Practical Reason*, 325d-327d / *Intro. Metaphysic of Morals*, 383a-b / *Judgement*, 513d-514b

43 FEDERALIST: NUMBER 72, 217a-b

43 MILL: *Liberty*, 302d-312a passim esp 306c-307a / *Utilitarianism*, 457c-461c passim esp 458a-b; 464b-c

44 BOSWELL: *Johnson*, 199d-200d; 314b-d; 363a-b

49 DARWIN: *Descent of Man*, 305a; 310c-d; 322a-c; 592d-593b

51 TOLSTOY: *War and Peace*, EPILOGUE I, 655c-656b

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 28d-32a; EPILOGUE, 411b-412d

53 JAMES: *Psychology*, 203a-204b

54 FREUD: *War and Death*, 757c; 758c-759b / *Civilization and Its Discontents*, 792b-795b / *New Introductory Lectures*, 876c-d

4d(3) The guidance of laws and customs: the limits of positive law with respect to commanding virtue and prohibiting vice

5 AESCHYLUS: *Eumenides* [490-565] 86b-87a; [681-710] 88b-c

5 EURIPIDES: *Orestes* [491-525] 399a-b

6 HERODOTUS: *History*, BK I, 3a; BK VII, 232d-233a

6 THUCYDIDES: *Peloponnesian War*, BK II, 396c-d; BK IV, 478d-479b

7 PLATO: *Protagoras*, 45b-47c / *Gorgias*, 271b-272b / *Republic*, BK II, 314b-c; BK II-V, 320c-355a; BK VI, 377a-379c / *Statesman*, 607b-608d / *Laws*, BK I, 642d-648c; 650a-b; BK II, 653a-662a; BK VII, 724c-730d; BK VIII, 735c-738c; BK XII, 792c-d / *Seventh Letter*, 800b-c; 806b-c

9 ARISTOTLE: *Ethics*, BK II, CH 1 [1103^b3-6] 349a; BK V, CH 1 [1129^b12-24] 377a; CH 2 [1130^b7-29] 378a-b / *Politics*, BK II, CH 5 458a-460a passim esp [1263^a38-$^b26$] 458c-d; CH 7 [1266^b14-1267a17] 462b-d; CH 9 [1269^b13-1270^a14] 465d-466b; BK VII, CH 13-17 536b-542a,c

14 PLUTARCH: *Lycurgus*, 32a-48d / *Lycurgus-Numa*, 61b-d; 64a-c / *Solon*, 70c-74b / *Lysander*, 361a-d / *Cleomenes*, 659d-660a

15 TACITUS: *Annals*, BK III, 57b-58d

18 AUGUSTINE *Confessions* BK VI par 2 3 a-c / *Christian D ctrine* BK III CH I 662c 663c

20 AQUINAS *Summa Theologica* PART I II Q 92 A I 213c 214c A REP 4 214d 215a c Q 95 A I 226c 227c Q 96 AA 2 3 231c 233a Q 98 A 6 ANS 44c 245b Q 99 A 2 246b 247a A 6 250a 251a Q 100 A 9 261b 262b

21 D TE *Di e Comedy* PURGATORY VI [58-151] 61b 62c XVI [85-114] 77d 78a PARA DI E XV [9] XVI [154] 129b 132a

23 Ho ES *Lev t* PART II 131a b

25 MONTAIG E *Essays* 131b 132a

27 SHAKESPEAR *Measure for Measu e* ACT I SC II [120-139] 176b-c SC I I 177b d ACT II SC I [25 270] 181a c ACT III SC II [91 I 8] 190c d

30 BACON *Advancement of Learn g* 78d 81c

32 MILTON *Paradis Lost* BK XII [285-314] 325b 326a / *Are pagitica* 381a 412b esp 383a 395b

35 LO KE *Human Understand ng* 90a d BK I CH II SECT 8 105d 106a SECT 20 110c 111a BK II CH XXVI SECT 9- 3 230b 231c

35 HUM E *Hum Understandi g* SECT V I DIV 76 485a

38 MONTE QUIEU *Spir t of La s* BK IV 13b d 17b BK V 18b d 19d 21d 25a BK VII 44d 45c 47c 50c K XII 87 88a BK X V 105a 106b BK XVI 119d BK XIX 137c 142d

38 ROUSS AU *Polit l Economy* 372 373b / *Soci l Cont act* BK IV 434b-435a

40 G B N *De l e and F ll* 92c d 100c 101b 291d 292a

41 GIBBON *Decl ne nd Fall* 93 94a 389d

42 KA T *Pr f Met physic l Elements of Ethics* 366d 367b 373b-c / *Intro Metaphysic of Mo l* 383a b 387b 387d 388a / *Science of Right* 397 398a

43 CON TITUTION O THE U S AMENDM NTS XVIII 19c XXI 20b

43 FE ALIST NU BER 12 58b

43 M LL *Liberty* 269b 271d 272d 273d 278a 281c passim 286b 287a 295d 296b 300a 301c 302d 323a c / *Representat Govern ment* 35 b 348c 350a / *Utilitarianism* 456a d 457c 458b 467b-468a

44 BO WELL *Johnso* 197 b 222d 223b 301c d

46 HE E *Ph losophy f Right* PART I p r 38 21d ART I I pa 150 56 57a par 234 75d 76a / *Pl los phy of History* NTRO 166b

49 D RWIN *D ent of M n* 317 d

52 D STO VSKY *B thers Ka mazov* K 28d 32a

53 JAMES *Psychology* 190b-191a

54 FR UD *War d D ath* 758c d

4d(4) The influence on moral ch ract of po try music nd oth r arts the guid nce of h tory and ex mple

APOCRYPHA *W dom f Sol m n* 4 2—(D) OT *Book f Wisdom* 4 I 2

NEW TESTAM NT *I Co nth a s* 8 6-13 5 II / *Ph lippians* 3 , / *II Thes l n ans* 3 7-9 / *I Timothy* 5 20 / *Hebre s* 4 II / *I Peter* .21 23 / *II Peter* -6 / *Jude* 7

5 EURIPIDES *Suppl ants* [881-887] 266a b

5 ARISTOPHANES *Clouds* 488a 506d esp [882 1104] 499b 502a / *F gs* [1008 1098] 576b 577c / *Thesmoph ria usae* 600a 614d esp [330-567] 604b 606c

7 PLATO *Protagoras* 46b c / *Republ c* BK II IV 320c 355a BK VII 388a-401d esp 389d 398c BK VIII 409d BK X 427c-434c / *Timaeus* 455b c / *Laws* BK II 653a 662a K III 675c 676b BK VII 724c 730d

9 ARISTOTLE *P l tics* BK VIII CH 2 7 542b 548 c

12 AURELIUS *Meditatio s* BK XI SECT 26 306b

14 P UTARCH *Lycurgus* 33d 34a 43b d / *So lon* 76a / *Pericles* 121a 122b / *Timol on* 195a b / *Dem t ius* 726a d

15 TAC TUS *Annals* BK XIV 146b-c

17 PLOTINUS *Fi st En ead* TR III CH I 2 10c d

18 AUGUSTINE *Co f ss ons* BK I par 20-27 6a 7d K III par 2-6 13c 14c BK X par 49-53 83c 85a / *City of God* BK I CH 31 33 147d 149 BK II CH 8 14 153d 157c BK IV CH 26-27 202a 203c

21 DANTE *Di ine Com dy* PARADISE XVI [I 0-142] 133a-c

22 CHAUCER *L Emot* 550 b

25 MONTA GNE *Es ys* 197a 199c 455d-456a

26 SHAKESPEARE *Merchant of Venice* ACT V SC I [66 110] 431b d

29 CERVANTES *Don Quixote* esp PART I XIIIc d 1a 3b 13b 16c 183d 187c 189d 191d PART I 252a b 322a 427a-429d

30 B CON *Ad ncem nt of Lea ning* 38 39d 79c 80a 85a b

32 MI TON *Areopagitica* 385a 386b

33 PASCAL *Pensees* II 173b 174a

36 STERNE *Tristram Shandy* 250b 251a

38 MONT SQU U *Sp t of Laws* BK IV 17b 18d

39 SMITH *W alth f N tions* BK V 337d 338c

40 GIBBON *Decline and Fall* 94a b 284a b 449a b

41 GI ON *Decline and Fall* 225a-c 311b

42 KANT *Fund Pr n M taphysic of Morals* 263a b 266d [fn 2] / *Practic l Reason* 327a d / *Judg ment* 513d 514b 523 -c 587a

44 BOSW *J hnson* 116b 259b 308b-d

46 HEG L *Ph los phy f Hist y* INTRO 155 d

53 JA ES *P ych l gy* 826b 827

4 Th moral qu l ty of human cts

4e(1) The distinction between human or moral acts and the non oluntary o reflex acts of man

7 PLATO *Protagoras* 45b-c / *Ti eu* 474b d

9 A ISTOTL *Eth cs* K I C 3 [II 13 7] 347c [1102 34 b 3] 347d 348a K I I I 355b d 357b c 5 359c 361 c 12 [1119 21 34] 365d 366 / *Rh t ic* BK I C o [1368b7 12] 611d

(*4e Th moral qual ty of human acts 4e*(1) *The d t ct on between human or moral acts and the nonvolunt..ry or reflex acts of a man*)

12 AUR LIUS *Med tations* BK XI SECT 18 304b 305b
18 AUGUSTINE *Confessions* BK I par 19 5d
19 AQUINAS *Summa Theologica* PART I II Q I AA I 3 609b 612a Q 6 644a 651 QI 8 A 6 ANS 697d 698c Q 21 A 2 718 d
21 D NTE *Divine Comedy* PUR ATORY XVI [52 81] 77b c
23 HOBBES *Leviathan* PART I 61a b
27 SHAKESPEARE *Hamlet* ACT V SC II [236–255] 70b c
31 SPI OZA *Ethics* PART IV DEF 8 424b c PROP I 18 424c 429d
38 ROUSS AU *In quality* 337d 338a
42 K NT *Pure R aso* 164b-c 235 d / *Fund Prin Metaphys c of Mo al* 282b 283d / *P ac t c l Re o* 304a d / *Pref Metaphys cal Ele m nts of Eth s* 378a b / *Intro Metaphysic of Moral* 386d 387 c
49 DAR IN *Descent of Ma* 311b d 592b
51 TO TOY *W a and Pea e* EPILOGU II 688a 690a
53 JAMES *P ychol gy* 186b 187a 807 808a 814b 819a passim esp 814b 815 818b

4*e*( ) The cr teria of goodness and evil n human act

7 PLATO *Republic* K IV 354d 355 BK X 439b d / *Laws* BK IX 747b d
9 ARI TOTLE *Ethics* K II CH 4 350d 351b CH 6 351 352d p m K VI H 12 [1144 24] 393d 394a
12 E T TUS *Di c u ses* BK I CH 6 110c 112b CH II 116d 118d K I I CH I 175 177 CH 3 178d 180a CH 10 185d 187a CH 20 192d 193d BK IV CH 5–6 228a 232c
12 AUR LIU *M ditations* K II S T I 258 b K V S CT 24 265c d ECT 39 267a K V S CT 12 271 S CT 14 16 271b d K VI SECT 20 281b S CT 55 283b c K VI SE T I 285a b K X ECT I 291a c ECT 16 293a
18 AU UST NE *Co fess s* BK I I pa 15 17 17 18a
19 AQU N *Summa Th ol gica* P RT I II QQ 18 21 693b d 720a c
21 D N *D n C medy* ELL XI 15a 16b URGATORY XVII [82 39] 79b d XX II [24– 4] 95d 96a
23 H S *Leviatha* PART 61d 62a 85d 86b 91b 92d 96a b RT I 149b c P RT IV 272c
25 MO TAIGN *E s ys* 103c 104d 159a 162c
30 BACON *Ad cement of Le n g* 70d 71b
31 S I OZ *Eth cs* PART IV PREF DEF 2 422b d 424 D 8 424b-c PROP I 28 424 431c esp PROP 18 19 428d-429d P OP 22 430b-c P OP 45 46 438a d PRO 50–54 439b-440 PROP 58–59 441d-442d PRO 61–63 443a 444 P OP 65–66 444b-d

33 PASCAL *Pensées* 499 260b
35 LOCKE *Human Understandi g* 90a d K I CH II SECT 5–6 105a c BK II CH X I SECT 43 188d SECT 55–56 192c 193b CH XX III SECT 4 17 229b 232d
36 STERNE *Tristram Shandy* 257a 268a
37 FIELDING *Tom Jones* 38c 40a
38 ROUSSEAU *Inequality* 343a 345c
39 SMITH *Wealth of Nations* BK V 346c 347d
42 KANT *Pure Reason* 114d 115a 169b [fn 1] / *Fund Pr n Metaphysic of Morals* 253d 254d 262a c 270c d / *Practical Reason* 317b-318c 321b 329a esp 325a 327d 341c 342a 358a / *I t o Metaphysic of Morals* 387b 387d 388a 389a 390a c / *Judgement* 595a d
43 MILL *Liberty* 270a 271d 286b 287a 307b-d / *Util arianism* 445a-476a c esp 448a 454a 455a 461c 464d 467b 471b
44 BOSWELL *Johnson* 112a b 145c d 310d 311a
46 HEGEL *Philosophy of Right* PART II par 113 41d 42a par 135 47b d par 140 49b 54a PART III par 234 75d 76 ADDITIO S 56 125b c 67 126d 86 129c 91 131a d
49 DAR IN *De cent of Man* 592d 593a
51 TOLSTOY *War and Peace* BK XIV 611a c
53 JAMES *Psychology* 796a 798a passim
54 FREUD *War and Death* 758a 759a-c / *Civilization and Its Discontents* 792b-c

4*e*(3) Circumstances as affecting the morality of human acts

9 ARISTOTL *Ethics* BK II CH 3 [1 04b24 2] 350b BK III CH I [1110b 8 111 a20] 356c 357a BK V CH 5 372d 373
19 AQUIN S *Summa Theologica* PA T I I Q 7 651d 655a Q 18 AA 10–11 701b 703a
20 AQUINAS *Summa Theologica* PART I II Q 73 A 7 124d 125c
23 HO *Leviathan* PART I 86b 91a b 96a b
25 MONTAIGNE *Essays* 13d 14c 103c 104d 203a c
30 BACON *Adv ncement of Lea ning* 76d 78d
33 PASCAL *Provincial Letters* 19a 62a passim
35 LOCKE *Human Understanding* BK II CH XX SECT 54 192b c
35 HU E *Human Understand ng* SECT VIII DIV 76 485a-c
37 FIELDING *Tom Jones* 271c 273a c
38 ROUSSEAU *I equality* 343a d 347d 348a 362 d 363a 366d / *Social Contract* BK I 393b-c
42 K NT *Pu Reas n* 169c 170
44 BOSW L *Johnson* 283a 429d-430b
46 HEG L *Ph losophy of Right* PART II p r 115 117 42b d ADDIT ONS 74 127d 128a 144 140a / *Phil phy of H story* INT 165a 166b
51 TOLSTOY *War and Peace* BK I 9c 10d BK VI I 303 305b K XII 578d 579 BK XV 627b c PILOGUE I 645a 646c EPILOGUE II 686c 687a
54 FREUD *General Introduction* 531a d

5 Psychological factors in the formation of moral virtue

5a The emotions and pleasure and pain as the matter of virtue the role of desire or appetite

7 PLATO *Laches* 32c / *Protagoras* 59 62d / *Phaedrus* 120a 122a / *Gorgias* 275d 285a / *Republ c* BK IV 347a 348d 350a 355a BK VI 374c K VII 390b / *T maeus* 466b 474b d / *Laws* BK I II 644b 653c BK V 689c 690c BK VI 712b K V I 714c 716a BK VIII 735c 738c

8 ARISTOTLE *Phy cs* BK VII CH 3 [246b20-247 19] 330a b

9 ARIS TLE *Eth cs* BK I CH 13 [1102b13 1103 11] 348a d K I CH 2 [1104 19]-CH 3 [105 17] 349c 350c CH 6 [06b8 1107a28] 352a d CH 7 [8 30-b6] 35 d 354a CH 9 [9 3 b13] 355a c BI I I CH I [1111a-2 b3] 357a b CH 9-12 363d 366a c BK IV CH 5 372d 373c CH 8 375a d BK VI 395a-406 c BK X CH -5 426a-430d passim CH 8 [1178a8-2] 432d CH 9 [1179b4 118 a24] 434b-435a / *Politics* BK CH 3 [1260 4 b8] 454c 455 c BK V I CH 7 531d 532c I 15 [1334b8 28] 539b-d BK V I CH 5 544c 546a passim

12 EP CT TUS *Discou ses* BK II CH 18 161a 162b BK II CH 24 208b 210a

12 A R LIU *Medi t ns* BK VII CT 55 283b c K SE T I 291 C CT 7 292b

14 PLUT RCH *Ant y* 7 3d 754a 760d 761a 761c 772 / *D* 798b d

18 AUGU TINE *C fess n* BK VI par 10 11 55 56b BK X par 41-53 81 85a / *City of God* BK XIV CH 5-9 379c 385b

19 AQUIN S *S mma Theolog ca* PART I I Q 24 727 730a P A 4 729c 730a Q 34 A 4 771c 772b Q 39 A 790d 791b

20 AQU AS *S mm Th ologica* PART I I Q 50 A 3 8b 9a Q 56 A 4 32b-33 A 5 REP I 33 34b QQ 59-60 45d 54d Q 7 A 4 ANS 329d 330d P RT II I Q 15 A 3 453c-454c

21 D N E *Div Comedy* H LL I II 1a 4a PURGATOR 53a 105d esp XV [40]-XVIII [75] 75d 80c

23 HOBBES *Le than* PART I 61 63a 68b 85d 96a b PART II 141a b PAR V 272

25 MO A GNE *E ays* 20d 22a pass m 89b 91b 118d 119d 124c 125 159a 162 p m 200d 204d passim 350d 354b 540b

27 SHAKE P ARE *Othello* ACT III [32 33] 212b c

30 B ON *Adva em nt of Lear ing* 66 d 78a d

31 S INOZ *Ethics* PART V D F 8 424b c PRO I 8 424c-429d esp PRO 18 D MON T 428d 429a PROP 59-73 442b-447a esp PRO 60 442d-443a

32 M LTON *Are p gitica* 390b 391a

33 PA CAL *P v l Letters* 64b 67b / *Pensé* 160 202a b 412 413 242a 4 3 243b 502 260b 261a

35 LOCKE *Human Understanding* BK II CH XXI SECT 35 186b-d SECT 46-48 189d 190d SECT 5 -56 191d 193b SECT 71 72 197b-198c

38 ROUSS AU *I equality* 343a b

42 KANT *Fund Prin M taphysic of Morals* 256b 258d 259a 282d 283d 286a-c / *Practi cal Reason* 298b c 341c 342a / *Pref M ta physical Elements of Ethics* 365b-366d 368d 369 375 b / *Intro Met physic of Morals* 385a-c / *Judgement* 586d 587a

43 MILL *Liberty* 295b-d / *Utilitarian sm* 461c 464d

49 DARWIN *Descent of Man* 311a 314b passim 316a 317a 318d 319a

51 TOLSTOY *Wa and Pea* BK VI 245b c 248b-250a

53 JAMES *Psychology* 799a b 808a 814b pa im esp 810a 816a 817a

54 FR UD *Origin and Development of Psych Analysis* 16c / *Gener l I troduction* 501d 504b / *War and Death* 758a d / *New Introd ct ry Lectures* 837d 838d 844c

5b Deliberation and j dgment in the forma tion of virtue the role of reason

5 EURIPIDES *H ppolytus* [373-387] 228b-c

6 THUCYD DES *Peloponnesian War* BK I 370a-c

7 PLATO *Republic* BK IV 350a 355a / *Laws* BK I 669b d / *Seventh Letter* 810 d

9 ARISTOTLE *Eth cs* BK I CH 13 [1102b 3-11 3 3] 348a c BK CH 6 351c 352 I passim BK III CH -5 355b d 361a CH 12 [I 19 35-b 9] 366a c BK VI e I-2 387a 388b CH 5 389a c CH 9 3 391c 394d passim BK V I CH -10 400d-403c passim K X CH 8 [1168b28-1169] 422b d K X CH 8 [1178 16-24] 432d-433 CH 9 [179b4 118 3] 434b d / *P lit c* BK VII CH 13 [1332 39 b10] 537a b H 15 [1334b8 8] 539b d

12 AURELIUS *M dit tions* K II SECT 5 257b-c BK IX T 7 292b

18 A GU TINE *City f God* BK XIX CH 4 512a b

19 AQUINA *Summa Th logica* PART I II Q 45 A 4 ANS 812b 813a

20 AQU NAS *Summa Theol gica* PART I II Q 56 A 3 ANS 31a 32b

23 HOBBES *Levi than* PAR I 64a c RT II 141a b

25 MONTAI NE *E s av* 21c 22a 115b 119d 124c 125 159a 162c 200d 205b 353c 354b

30 B CON *Adv ncement f Learning* 60 67b

31 S NO A *Eth cs* PAR IV PROP 17 SCHOL 428 d PRO 23-24 430c d ROP 59 73 442b-447 ART V PRO I 0 452d-458a

32 M L ON *P d se Lost* K IX [335-375] 254b 255b

33 I CAL *Pen es* 381 383 238b

35 LO KE *Hum n Und r t nd g* K II C XXI S CT 46-54 189d 192 E T 60 196d 197

38 ROU AU *Inequ l ty* 337d 338a 344d 345c

42 KANT *Fu d Prin Met physic f Morals* 256c 257d 263 b 266b c / *P actical Re son* 305d

(5 *Psychological factors in the formation of moral virtue 5b Deliberation and judgment in the formation of virtue the role of reason*)

306a 321b-325c 339b d 357c 360d / *Pref Metaphysical Elements of Ethics* 374a c 378a b / *Intro Metaphysic of Morals* 387d 388a
44 Boswell *Johnson* 297b
46 Hegel *Philosophy of History* intro 165c 166b
49 Darwin *Descent of Man* 310c d 312a 313a 593a b
51 Tolstoy *War and Peace* bk vi 248b 250a
53 James *Psychology* 14b 15a 202b 886b 888a

5c Intention and choice as conditions of virtue the role of will

Apocrypha *Ecclesiasticus* 15 11 20—(D) OT *Ecclesiasticus* 15 11 21
9 Aristotle *Ethics* bk i ch 13 [1102b13-1103 4] 348a bk ii ch 6 351c 352d esp [1106b36-1107a9] 352c bk iii ch 1-5 355b d 361 ch 12 [1119 21-34] 365d 366 bk vi ch 2 387a 388b bk vii ch 7 10 400d 403c bk viii ch 13 [1163a21 24] 415d bk ix ch 8 [1168a28 1169 1] 421d 422d bk x ch 8 [1178 34 b8] 433a b / *Politics* bk vii ch 13 [1332 28 32] 537a
12 Epictetus *Discourses* bk i ch 22 127c 128c
18 Augustine *City of God* bk xiv ch 5-6 379c 380c ch 13 387c 388c
20 Aquinas *Summa Theologica* part i ii q 50 a 5 10b d q 55 a 1 rep 2 26b 27a q 56 a 6 34b 35a q 60 aa 2 3 50d 52b
21 Dante *Divine Comedy* purgatory xviii [40-75] 80b xxvii [124 142] 95d 96a
23 Hobbes *Leviathan* part iv 272c
24 Rabelais *Gargantua and Pantagruel* bk i 65c 66b
25 Montaigne *Essays* 13d 14c
32 Milton *Paradise Lost* bk iii [80 134] 137a 138a
35 Locke *Human Understanding* bk ii ch xxi sect 51-54 191b-192c
38 Rousseau *Inequality* 337d 338a
42 Kant *Fund Prin Metaphysic of Morals* 256a b 259 b / *Practical Reason* 291b d [fn 1] 304a d 309d / *Pref Metaphysical Elements of Ethics* 378a b
43 Mill *Liberty* 295a 297b / *Utilitarianism* 463 464d
46 Hegel *Philosophy of Right* additions 67 126d / *Philosophy of History* intro 165c 166b
51 Tolstoy *War and Peace* bk vi 248b-250a
52 Dostoevsky *Brothers Karamazov* bk ii 20a-c bk v 129d 132b
53 James *Psychology* 186b 187a 271b-275a passim esp 272b-273a 274a 275a 806a 808a 814b 819a passim esp 818a b 825a 827a

6 Virtue in relation to other moral goods or principles

6a Duty and virtue

12 Aurelius *Meditations* bk vi sect 2 274 bk viii sect 32 287d 288a
14 Plutarch *Pericles* 121a 122b
18 Augustine *City of God* bk xix ch 19 523b
21 Dante *Divine Comedy* purgatory xvii [8… xviii [75] 79b 80c xxx xxxi 99b 102b passim
25 Montaigne *Essays* 300c 307a esp 303a-c
30 Bacon *Advancement of Learning* 74b-c
38 Rousseau *Political Economy* 369b 370 372b 373b / *Social Contract* bk i 393b c
42 Kant *Fund Prin Metaphysic of Morals* 258d 259a 262a 263c 267b d 269b [fn 1] *Practical Reason* 305d 307d 325a 329a c 325c 327d 329a / *Pref Metaphysical Elements of Ethics* 366d 368d 373b d / *Intro Metaphysic of Morals* 383a 390a c esp 383a 38… 389a 390a c
43 Mill *Liberty* 290c 291a / *Utilitarianism* 453c-454a 457c 461c passim 464d-476a passim
46 Hegel *Philosophy of Right* part ii par 1… 47b d part iii par 150 56c 57a additio… 86 129c / *Philosophy of History* intro 16… 166b
49 Darwin *Descent of Man* 304a 310d 31… 592c 593b passim

6b The relation of virtue to pleasure

7 Plato *Protagoras* 59a 62c / *Gorgias* 275… 285a / *Republic* bk ii 313d bk ix 421a-42… / *Laws* bk i 649d 650b bk ii 656d 658… bk iii 669b d bk v 689c 690c / *Seventh Letter* 801b c 806a
8 Aristotle *Topics* bk i ch 5 [102b14 … 145c bk ii ch 3 [118b27 36] 165d 166a *Physics* bk vii ch 3 [246b20-247a19] 330a
9 Aristotle *Ethics* bk i ch 8 [1099b3… 1 99a30] 344b d bk ii ch 7 [1108 23 … 353d bk iv ch 8 375a d bk vii 395a-406a passim esp ch 11 14 403c-406a c bk ix … 9 423a 424b bk x ch 1-5 426a-430d pass… / *Politics* bk ii ch 7 [1266b27 126… 462b d bk vii ch 1 527a d
12 Epictetus *Discourses* bk ii ch 11 151a … ch 19 163b
12 Aurelius *Meditations* bk ii sect 10 257… 258a bk iii sect 6 261a c bk vi sect … 275b d bk iii sect 10 286b … 19 286… 287a sect 28 287c sect 39 288c bk … sect 1 291a c
18 Augustine *Confessions* bk viii par 10 … 55c 56b bk x par 41-53 81c 85a
19 Aquinas *Summa Theologica* part i ii q … a 6 762d 763c q 34 a 1 768c 769d a 4 77… 772b
20 Aquinas *Summa Theologica* part i ii q … a 4 ans 52b 53a a 5 ans 53a 54d

21 DANTE *Daine Comedy* PURGATORY XXX XXXI 99b-102b
24 RABELAIS *Gargantua and Pantagruel* BK I 65c 66b
25 MONTAIGNE *Essays* 28a d 162c 167a 200d 205b 392a b 408a b 540b-d
30 BACON *Advancement of Learning* 71d 72b
31 SPINOZA *Ethics* PART IV PROP 1 18 424c-429d
33 PASCAL *Pensees* 412 413 242a 4 3 243b
35 LOCKE *Human Understanding* BK II CH XXI SECT 35 186b-d SECT 71 197b-198a
40 GIBBON *Decline and Fall* 192b
42 KANT *Fund Prin Metaphysic of Morals* 256c 257c / *Practical Reason* 298a 300a 304a 307d 338c 355d passim / *Pref Metaphysical Elements of Ethics* 365b 366d / *Intro Metaphysic of Morals* 387b 388a / *Judgement* 478a 479d
43 MILL *Utilitarianism* 447b-450b 463a-464d
44 BOSWELL *Johnson* 116b 393a b
49 DARWIN *Descent of Man* 316b 317a
51 TOLSTOY *War and Peace* BK V 198b

6 The relation of virtue to wealth

OLD TESTAMENT *Exodus* 20 15 17 23 3 6 8 / *Leviticus* 19 9-11 13 35-36 25 / *Deuteronomy* 5 9 21 15 7 15 17 16-17 22 1-3 24 0- 2 26 12 13 / *Nehemiah* 5—(D) *II Esdras* 5 / *Job* 29 12 17 31 16-23 / *Proverbs* 1 10-19 3:27 28 11 1 24 28 15 16 27 16 8 7:23 19 17 22 20 10 6-7 3 6 22 9 16 2 23 23-4-5 28.27 29 7 30 8-9 / *Ecclesiastes* 5 10-20—(D) *Ecclesiastes* 5 9-19 / *Isaiah* 1 3 33 15 17 58 3 12—(D) *Isaias* 10 1 3 33 15-17 58 3-12 / *Jeremiah* 6 3 8 10 17 11 22 3 17—(D) *Jeremias* 6 2 3 8 10 17 11 22 13-17 / *Ezekiel* 22 12 16 4-3 —(D) *Ezechiel* 22 16 24-31 / *Amos* 2 6-8

APOCRYPHA *Tobit* 1 passim 4 -19 passim 12 8- —(D) OT *Tobias* 1 passim 4 1 20 passim 8 / *Ecclesiasticus* 7 10 8.2 2 -6 14 13 26 29—(D) OT *Ecclesiasticus* 7 10 8.2 3 1 1 7 14 13 26.28

NEW TESTAMENT *Matthew* 5 40 4 6 1-4 19-21,24 34 19 6-3 / *Luke* 12 13 34 / *Acts* 20 33 34 / *II Corinthians* 8-9 / *I Timothy* 6 6-11 , 9 / *Hebrews* 13 5 / *James* 5 1-6

5 AESCHYLUS *Persians* [165 17] 17a / *Agamemnon* [355-389] 55d 56b [750-781] 60a b
5 SOPHOCLES *Antigone* [280 303] 133 d
5 EURIPIDES *Helen* [9 3-9 8] 306d 307a / *Electra* [367 395] 330c d [938-944] 335c / *Phoenician Maidens* [5 8-567] 382 -d
5 ARISTOPHANES *Plutus* 629a 642d esp [4 5 6 8] 633d-636d
6 HERODOTUS *History* BK I I 121b-c BK V 169d 170 BK V 201d 202c BK X 288b 297b-d
6 THUCYDIDES *Peloponnesian War* BK I 379 d
7 PLATO *Meno* 175b 178d esp 178c d / *Republic* BK 296c 297b 304 BK I 312b-313 BK III IV 341 343b BK VI I 405c 408a BK X 436c-437c / *Critias* 485b d / *Laws* BK II 656d 658b BK V 694a 695a BK VIII 733b 734a BK IX 751c d
9 ARISTOTLE *Ethics* BK II CH 7 [1107b9- 1] 353a b BK IV CH I 366b d 370b BK X CH 8 432d-434a passim / *Politics* BK II CH 5 458a-460a passim esp [1263 38-b 6] 458c d CH 7 [1 66b 1267a17] 462b d CH II [1273a22-b8] 469d-470 BK VII CH I 527a d CH 8 [328a21 b4] 532c d CH 13 [331b29-1332 32] 536b-537a / *Rhetoric* BK II CH 16 638b c
12 EPICTETUS *Discourses* BK II CH 19 163b BK IV CH 6 230b 232
12 AURELIUS *Meditations* BK VII SECT 33 288a
14 PLUTARCH *Pericles* 130b c / *Aristides Marcus Cato* 291b 292b / *Lysander* 361a d
15 TACITUS *Annals* BK III 58a
18 AUGUSTINE *Confessions* BK VI par 16 40a-c
20 AQUINAS *Summa Theologica* PART I II Q 60 A 5 ANS 53a 54d Q 65 A I REP I 70b 72a Q 84 A 174b 175a PART II II Q 186 A 3 REP 4 652d 655b
21 DANTE *Divine Comedy* HELL, VII [25-96] 9d 10c XIX [1 123] 26d 28a PURGATORY XIX [70]-XX [123] 82b 84c
22 CHAUCER *Tale of Wife of Bath* [6691-6788] 274b-276a / *Tale of Melibeus* par 49-52 422a 425b par 77 430b-431a
24 RABELAIS *Gargantua and Pantagruel* BK III 133b 135b
25 MONTAIGNE *Essays* 109d 110c 126b-131a passim
27 SHAKESPEARE *All's Well That Ends Well* ACT I SC III [123 153] 152d 153a / *Timon of Athens* 393a-420d esp ACT IV SC III [24 47] 410d 411a [382 462] 415a d
29 CERVANTES *Don Quixote* PART II 221d 222c 338b
30 BACON *Advancement of Learning* 7d 8b 77d 78a 86b c 92a b
33 PASCAL *Provincial Letters* 91a 94
37 FIELDING *Tom Jones* 178b d 283d 284a
38 MONTESQUIEU *Spirit of Laws* BK V 19a d BK VII 44d 45c BK XX 146b d
38 ROUSSEAU *Inequality* 327 328 360b 361a / *Political Economy* 375b d / *Social Contract* BK I 411a b
39 SMITH *Wealth of Nations* BK IV 265d 266b
40 GIBBON *Decline and Fall* 22
42 KANT *Fund Prin Metaphysic of Morals* 256 b / *Practical Reason* 330d 331a / *Pref Metaphysical Elements of Ethics* 370b d
43 MILL *Representative Government* 335b c / *Utilitarianism* 463a b
44 BOSWELL *Johnson* 102d 103a 413c d 491b 492b c 493 494b
46 HEGEL *Philosophy of Right* PART par 4 76d 77a
50 MARX *Capital* 61d 77 78b
51 TOLSTOY *War and Peace* BK I 50b BK V 194d 197b-c

(6 Virtue in relation to other moral goods or principles)

6d Virtue and honor

6e Virtue in relation to friendship and love

88a / Frankl n s Tale 351b-366a esp [11 830–928] 364b 366
23 MACHIAV LLI Prince CH XVII 24b
25 MONTAIGNE Es ays 82b 88d 390a b
27 S IAKES EARE Hamlet ACT III SC II [58 79] 49c d
31 S I OZA Ethic PART IV PROP 71 446a b
36 SWIFT G lli er PART V 165b 166a
38 MON ESQUIEU Spiru of Laus K V 18d 19d
38 R SS L Pol t l Eco m 373c 374a
43 MILL Utilu a i m 454a-455a 474b c
49 D R IN Descent of Man 310c d 592d
52 DOS EVSKY Brothers K m o BK II 40b c

7 The ole of virtue in political theory

7a The culti at on of virtue as an end of go erament nd the state

6 THUCYD DES P l ponnes an W a BK II 395d 399
7 PLA O P otag r s 46b-d / Go gias 282d 283a / Republic BK I II 310 -401d / Stat s m n 605d 608d / Laws BK 640d 652d BK I I 669b 670b BK X 794a 799a / Seventh Letter 806b c
9 ARISTOTL Eth BK I CH 9 [1099b 5–32] 345b CH 13 [102a5 5] 347b BK II CH I [103b3–6] 349a K V CH [I 29b12 24] 377 c I [30b7 29] 378a b BK X CH 9 [1179 33–18 b27] 434a-435c / Polit c BK I CH 2 [1253 I 39] 446b-d CH 13 [260b8 19] 455c B I CH 7 [I 66b ,– 267 17] 462b d C I 9 [69b13 I 70 14] 465d-466b K I CH 9 477 478d BK II H I–3 527a 530a CH 8 [328 b4] 532c d C I 13– 5 536b 539d
13 VIR IL A eid BK VI [847–853] 233b 234 BK XII [8 9–84] 376a b
14 PLUT RCH Lycu g 32a 48d sp 36a 48b / Lycu g Num 61b d 64 c / Solon 64b d 77a c / Ly and r 361a d
15 TA ITUS Ann ls K 57b 58d
20 AQU NAS Summa The log ca ART I II Q 92 A I 213c 214c
21 DANT D ti e Com dy PURGATORY X I [114] 77b 78a PARAD SE XX II [148] 148 d
25 M TAIGN E y 60c 61c 306 d
29 CE VAN E D n Q xot ART 353a
30 B ON Adv cement f Le rn g 54 b
31 S IN Z Eth RT V PRO 37 OL 2 435b 436 PRO 73 446 -447a
35 LO K T ler t 15d / C l G ernm t CH X T 28 54b / Hum U derst nd g K I I CT 5–6 105a
38 M QU EU Sp it f Laus K III 9b 11d BK V 15c 17b K V 18b d 19d 21d 25a BK X 119d
38 ROUS E U P lit cal Ec my 372 377b / S c l C ntr ct K 393b-c K 411 K IV 434b 435a
40 G ON D cl a d F ll 100 101b
41 GIBBON Decl ne and Fall 54d 55a
43 CONSTITUTION OF THE U S AMENDMENTS XVIII 19c XXI 20b
43 MILL R prese tat ve Go ernment 334a c 336c 338d 346c 350a / Ut litarianism 464d 476a passim esp 467b 468a 474d-476a
44 BOSWELL Johnson 178b c
46 HEGEL Philosophy of Right PART III pa 241 76d 77a par 257 80b par 273 91b-d ADDI TIONS 183 148d 149a / Philosophy of History ART IV 365d 366
51 TOLSTOY War and Peace BK VI 244d 245d

7b Ci ic virtue the v rtue of the good citizen compared with the virtue of the good man

OLD TESTA IENT Exodus 22:28 / Pr verb 16 13 20 23 I 3 24 2 25 6–7 / Ec le as tes 8 2 3 10 20
APOCRYPHA Ecclesiasticus 41 17 18—(D) OT Ecclesi sticus 41 21 23
NEW TESTAMENT Matthew 22 16–22 / Ma k I 14 17 / Luk 20 22–25 / Acts 23 5 / R mans 13 1–7 / T tus 3 1 / I Peter 2 13–21
5 SO HOCLES A ti g ne 131a 142d esp [633 765] 136c 137d
5 ARISTOPHANES Kn ghts 470a-487a p [1316– 408] 486a 487a c
6 HERODOTUS H story BK V 175b BK V I 233a d 258d
6 THUCYDIDES P l ponnesian War K I 370a-c K I 397d 398c 402d-404a BK III 425 427c passim K VI 511c d
7 PL TO Protago 43b 47 / Meno 174d 176 sp 175d 176a / Ap l gy 200a 212a c / C t 213a 219 c / Republ c BK I 300b 306b BK IV 346 355a / Stat man 605d 608d / Laws K I 669b 670c 672d 674d K V 686d 691b K VI 706b BK VIII 740d 741a / Seve th Letter 805d 806a 806d
9 AR TOTLE Eth cs K I CH 9 [99b29–3] 345b K II CH 8 [116 15 b3] 362b d BK V CH [I 9b12 3 13] 377a c CH – [130b7 29] 378a b K VI 8 [141b23–114] 390d 391 BK X H 9 434 436a c / Pol tics BK I H 13 [259b33 I 6 10] 454b d BK II CH [I 73 2 b8] 469d-470a K I I CH 4 5 473 475d H 9 [1280b3 11] 478a b CH 13 [83b44 I 84 3] 482 H 15 [86a22 5] 484c d CH 8 487 BK IV CH 7 [93b 7] 493a b K V CH [3 4 4 b6] 528b c H 3 529b 530a CH 7 531d 532 CH 9 [3 8b33 13 9a2] 533b CH 3 15 536b-539d BK II H I [1337 I 18] 542a
12 EP C TUS Discou K II CH 10 148c 150a K III C I 7 182b 184a
12 AUR L U M d t t ns K CT 256b d K II S CT 4–5 260b 261 BK IV CT 4 264a E T 9 266 K V CT 16 271c d T 272b K V T 4 274d 275 K V T 5 280a b ECT 13 280c S T 66 284b-c K IX CT 3 293c K X SE T 6

(7 *The role of virtue in pol t cal theory 7b Civic virt e the virtue of the good citizen com pared with the virtue of the good ma*)

297a b BK XI SECT 8 303a b SECT 21 305d 306a

14 P UTARCH *Lycurgus* 45b 48b c / *Co iolanus* 174b d 175a / *Ari tides* 263d / *Lysander* 361a d / *Ages laus* 480b d 481a / *Cleomenes* 659d 660a / *Demosthenes* 699 700a

15 TACITUS *Histori s* BK I 191c d BK IV 267c d

17 PLOTINUS *First E nead* TR II 6b 10a

18 AUGUSTINE *City of God* BK II CH 21 161b 162d BK V CH 12-13 216d 220a BK XIX CH 17 522b 523 CH 21 524a 525a CH 24 26 528b 529a

20 AQUINAS *Summa Theologica* P RT I II Q 6 A 5 58b 59d Q 92 A I R P 3 213 214c

21 DANTE *D i ne Comedy* HELL VI [58-75] 9 XI [1-66] 15a d XV [55-78] 21d XVI [64 78] 23a b XXXII [/] XXXIII [90] 48 50c pas sim PUR ATORY VI [58 151] 61b 62c XVII [91 123] 79b d PARADISE XV [97]-XVI [154] 129b 132a

23 HOBBES *Leviathan* PART II 154b 155c CON CLUSION 279a c

25 MONTAIGNE *Ess ys* 48a b 381a 388c esp 381 d 390c 391c 480b 482b 486b 489b 490c 491d

26 SHAKESPE RE *Jul us Caesar* ACT V SC V [68-8] 596a c

30 BACON *Ad cement f Learni g* 74b c 81d 82a 94b 95b

31 DESC RT *Disco r e* PART III 48b 49a

31 S NOZA *Eth s* PART PRO 73 446c 447a

33 PASC L *Pens es* 6 173a

35 LOCKE *Toler tion* 15d / *Hum n U dersta d ing* BK I CH II SECT 5-6 105 c

38 MONT QUIEU *Sp it of Laws* XXIIIa d BK 9b 12a K IV 13b d 15a 15c 17b BK V 18d 19d 21b 23 31b c K VII 44d 45 K III 51a 53 55c d

38 ROUSSEAU *I qual ty* 3 3a 328 360b d [fn] 366b d / *Pol t al Eco my* 369b 370a 372a 377b / *S cial Co t ct* BK I 402b 403a BK III 411a c 412a b K IV 428 432b p ss m 434b 435a

39 S ITH *W alth of N tions* BK V 337d 338c 340 343d 346c 347d

40 G BBO *De line and F ll* 193c 194a 630b d 631a 644b 645c

43 F DERALIST NU BER 55 174 d

43 M L *R pr s t t e G vernm nt* 329b 330a 334b 336c 337b 342d 343c 346c 350a

44 BO W *Joh n* 393a-c

46 HEG L *Ph l s phy of Right* ART III par 268 84c d / *Ph l ophy f Hi tory* INT O 171b-c P RT II 272a d ART V 365b c

49 D RWIN *Des nt of Man* 314 316 321b-c

51 TOLSTOY *W and Pea* BK VI 244d 245d 260a 262a K XII 537b 538a BK XV 634a 635a EPILOGUE I 668a 669c EPILOGUE II 686c 687a

7c The aristocratic principle virt e as a coo dition of citizenship or public office

6 HERODOTUS *History* BK III 107d 108a

6 THUCYDIDES *Peloponnesian War* BK III 425a c

7 PLATO *Republic* BK III 339b 341d BK V 369c 370a BK VI 373c 375b BK VII 390b 391b / *Statesman* 605d 608d / *Laws* BK XII 796b 799a / *Seven h Let er* 807a b

9 ARISTOTLE *Politics* BK II CH II [1273 2 b] 469d 470a BK III CH 4 5 473c 475d CH 7 476c 477a CH 9 [1281 2 8] 478c d CH 478d 479a esp [1281a9-34] 479a CH II [1281 39 b15] 479b c CH I 13 480c 483a CH 15 [1286a7 b14] 484b-485a CH 16 [1287b12 14] 486a CH 18 487a c BK IV CH 7 493a b BK V CH 7 [1307 5 15] 509a CH 9 [1309a33 b13] 511c d BK VII CH 9 [1328b22 13 9 2] 5 a

14 PLUTARCH *Lycu gus* 45c d / *Lysander* 365 366a / *Lysander Sulla* 387d 388a

15 TACITUS *Annals* BK XI 105d 107b

27 SH KESPEARE *Coriolanus* 351a 392 c esp ACT I SC I [9 166] 352b 353a ACT III SC I [142 161] 370d 371a

35 LOCKE *Civil Government* CH VII SECT 94 46 c CH VIII SECT 105 112 48c 51b pas sim

38 MONTESQUIEU *Sp rit of Laws* BK III 10c 11a BK V 23a 25 K VIII 52c 53a

38 ROUSSEAU *Social Contract* BK III 411c 412c

40 GIB ON *Decli e and Fall* 61d 62a

43 FEDER LIST NUM ER 68 206b c

43 M L *Representative Government* 336c 338c 363a 366a 384a 387d

44 BOSW LL *Johnson* 125c d 141a 178b-c

46 H GEL *Phil sophy of Right* PART III par 291 295 97d 99a ADDITIONS 169 145d

51 TOLSTOY *War and Peace* BK VI 244d 245d

7d The irtues which constitute the good or succes f l ruler the ices associated w th the possession of power

OLD TESTAM NT *Exodus* 18 21 26 / *Deuteron omy* 1 13 18 17 14 20 / *Judg s* 9 / 20 / *I Samuel* 8 11 18 15 2 3 (D) *I K g* 8 11 8 15 22 23 / *I K ng* 3 16-28-(D) *III Kings* 3 16-28 / *II Chronicles* 17 12-(D) *II P l pomen n* 1 7 12 / *Psalm* 2 72 101-(D) *P alms* 2 71 100 / *Proverb* 14 35 16 12 15 17 7 20 6 28 5 5 8.2 15 16 9 2 4 4 31 4 5 / *E clesiastes* 10 5 7 16-17 / *Is iah* 3 14 5 0 1 3 11 1-5 14 5 6 16 5 56 9-12-(D) *Isa as* 3 14 15 10 3 11 1-5 14 5-6 6 5 56 9-12 / *J remiah* 23 1-6-(D) *Jer mias* 23 1-6 / *E kiel* 22 27 45 9 46 18-(D) *E chiel* 22 27 45 9 46 18

APO RY A *W sdom of Solomon* 1 1 6 9-(D) OT *B ok of W sdom* 1 1 6 9 / *Eccle ast cus* 8 2 10 1 3-(D) OT *Eccl siast cus* 8.2 3 10 3 / *I M c abees* 14-(D) OT *I Macha be s* 14

4 HOMER *Iliad* BK IX [1 172] 57a 58d
5 AESCHYLUS *Persians* 15a 26d esp [623-908] 21c 24d
5 SOPHOCLES *Oedipus the King* [863-910] 107b-c / *A tigone* 131a 142d esp [162 210] 132c d [633 ,65] 136c 137d
5 EURI IDES *Medea* [115 13] 213b / *Suppliants* [86-358] 260d 261c / *Iphigenia at Aulis* [334-375] 427d-428b
5 ARIST ANES *Kn ghts* 470a-487a c / *Lysistrata* 583 599a c esp [486-586] 589a 590d / *Ecclesiazusae* 615a 628d esp [173 40] 617a c
6 H RODOTUS *History* BK I 107c d BK IX 314a c
6 THUCYD DES *P l pon esian War* BK II 404a d BK III 425a-c 427a c K VI 513a d
7 PLATO *Gorgias* 285a 294d / *Republic* BK I 300b 306b BK II VII 319 -401d / *Timaeus* 442b d / *Statesma* 605d 608d / *Laws* BK IV 679c 682c BK XII 794a 799a c / *Seventh Letter* 804b 805 806d 807b
9 ARISTOTLE *Pol tics* BK I CH 13 [1259b33-60 0] 454b d BK II CH 9 [1 71b1-9] 467d BK III C 1 4 [1277a, b29] 474a-475a CH 7 [1 79a33-b4] 476d CH 13 481b 483a CH 15 [286b8 22] 484d-485a CH 17 [1 87b40]-c 8 [1288b6] 486c-487a BK V CH 9 [1309 33 b13] 511c d CH 11 [314 30-1315b11] 517a 518c BK VI CH 2 3 528a 530a CH 14 [1332b12]-CH 15 [334b8] 537b 539
12 EPICT TUS *Discou s s* BK II CH 7 182b 184a
12 AU EL US *Med t tions* BK I 253 256d K II S CT 5 261a K V SECT 30 276d 277a BK V I SECT 36 282b
14 P U ARCH *Lycurgu* 45c 47a-48c / *Numa P mpil s* 49a 61d esp 59 60b / *Pericl s* 121a 141a c / *C iol s* 174b d 193a c esp 180d 181b / *Alcibiades Co iol nus* 193 195a,c / *Aristid s* 262b d 276a c esp 263d 267a 273d 275c / *Ma cus Cato* 276b d 290d esp 282a / *Ar tide Marcu C t* 290b d 292d / *Pyrrhus* 314b d 332d esp 319b 321a / *Ly der* 354b d 368 esp 357a b 362b 365a / *Sulla* 384 / *Lys der Sulla* 387b d 388c / *Nicias* 423a 430d / *C sas Nic as* 455d-456d / *Age l us* 480b d-499a esp 482d-484a / *Alex nder* 540b d 576d / *Ca sa* 577a 604d esp 598d 601b / *P oci n* 604b d 619d e p 604b d 605d / *Cato th Yo ger* 620 648 esp 626d 627b 637b / *Agis* 648b d 649b / *Cleome e* 661b d / *Ca and Ti erius Gra hu Ag s d Cleomenes* 689b d 691 c / *Demetri* 726a 747d esp 742 743b / *D o* 781b d 802 p 781b d 800a-c / *Br tus D on* 824b d 826
15 TA ITUS *A ls* BK I 41c d BK VI 86a b 87b c 90d 91 100a b K XI 102d 103 / *Histories* K I 193 194a 197a b 198b 208b-c K I 215c d 223a b 236d 237a 238d 240b BK I 254d
18 AU U T E *City f G d* K X X H 9 523b d
20 AQUINAS *S mm Th l gica* RT Q 9 A I REP 3 213c 214c Q 105 A I REP 2 3 307d 309d
21 DANTE *Divine Comedy* HELL, XII 16b 17d esp [103 112] 17c XXVII [55 136] 40 41b PARADISE XIII [94 108] 126b-c XVIII [5] XX [148] 134a 138b passim
22 CH UCER *Physician s Tale* 366a 371a
23 MACHIAVELLI *Prince* 1a 37d esp CH VIII 12d 14c CH XV XIX 22b 30a
24 RABELAIS *Garganti a a d Pantagruel* BK I 58a 60c
25 MONTAIGNE *Es ays* 314c 316 337b-c 350d 354b 386b 388c 436c-438b 452a d
26 SHAKESPEARE *Richard III* 105a 148a c / *Merchan of Ven ce* ACT IV SC I [84 97] 427c / *1st Henry IV* ACT I C II [18 240] 437c d ACT II SC II [93 161] 453d-454c / *2nd Henry IV* ACT IV SC V 494b 496d / *Henry V* ACT I SC I 533a d ACT IV SC I [1 3-301] 552d 554c / *Jul us Caesar* ACT II SC I [10-34] 574c d ACT III SC II 583 586c
27 SH KESP ARE *Measure for Measure* ACT I SC I 174a 175b SC III 177b-d ACT III SC II [275 96] 192b / *K ng Lear* ACT III SC IV [26-36] 264c / *M cbeth* ACT IV SC I I [1 139] 303b 304d / *Coriolanus* ACT II SC III [62-229] 367d 368c ACT III 369a 377a
29 C RVANTES *Don Quixot* PART II 332b 336a 340b 343a 360d 361d
30 BACON *Ad ancement of Learning* 1a 2c 4 6c 20d 25c 74d 75a 94b 95b / *New Atl ti* 205d 207b
32 MILTON *Lord Gen Cromwell* 69a b / *S Henry Vane* 69b
35 LOCK *C vil Government* CH XIV SECT 160-166 62d 64a
36 S I T *Gull ver* ART I 28b 29b
38 MONTESQUI U *Spi it of Laws* BK VI 40a b BK XII 93 95b BK XXI 170a BK XXVIII 259b K XXIX 262a
38 R U EAU *Inequality* 362a d / *Pol tical Ec nomy* 367a 377b passim / *S cial Cont act* BK III 412d 413 414b-d
40 GI ON *Decl n a d Fall* 30c 32b passim 34a 39d 61d 64c pass m 142b- 255b d 257 passim 284a 338d 339 343c 344 c 430a d 448c 449d
41 GI ON *De l e and Fall* 39b 40a 67d 68b 103d 104c 113 114a 168b 177c passim p 176c d 504c 505 577d 579
43 F D R LIST NUMB R 3 33d 34a NUM R 15 65b d NUMBER 83c d NU IB R 55 174 d NUM R 57 176d 177a NUM BER 75 223c d
43 MILL *Rep entat Government* 363a 366a 368b 369a
44 BO ELL *J hn on* 120 -c 178b
46 H *Ph l ophy f History* ART I 275d 276d 281c 282d P RT V 360b 362a 366b
48 M VIL *Moby D k* 106a 107b
51 TOLSTOY *War a d P c* K I 9c 10d BK V 216a d BK X 463 467a BK XIV 611a c E I GU I 645a 646 GUE 680 d

8 The religious aspects of virtue and vice

8a The moral conseq ences of original sin

OLD TESTAMENT *Ge esis* 3 9- 4 6 5 13 8 21 / *Job* 15 14 16 25 4-6 / *Psalms* 14 1 3 39 5-6 11 51 2-5 53 1 3—(D) *P alms* 13 1 3 38 6 7 12 50 4-7 5 1 4 / *Proverbs* 20 9 / *L cl siastes* 7 2 27 29 9 3—(D) *Eccl siastes* 7 1 28 30 9 3 / *Jeremiah* 17 9—(D) *Jere m as* 17 9

APOCRYPHA *Wisdom of Solomon* 2 23 4—(D) OT *Book of Wisdo n* 2 23 25

NE TESTAMENT *Joh* 8 3 8 / *Romans* 3 9 5 21 esp 5 12 21 7 8 20 21 9 29 / *I Cori thi ans* 15.21 22 / *Galatians* 2 16 3 esp 3 11 3.22 4 1-7 5 19 21 / *Ephes ans* 2 1-5 / *I John* 2 15 17

18 AUGUSTINE *Confessions* BK I par 18 5c d / *City of God* BK XII CH 21 22 357a c BK XIII C 1 1 15 360a 366d BK XIII H 23 BK XIV CH 5 372a 380b BK XIV CH 12 13 387a 388c CH 15-27 388d 397a BK XXI CH 12 571a c CH 15 572c 573b K XXII CH 22 23 606d 609a CH 30 617c 618a

19 AQUINAS *Summa Theologica* PART I Q 97 A 1 REP 3 513c 514c Q 98 A 2 517d 519a P RT I II Q 17 A 9 R 1 3 692d 693d

20 AQUINAS *Summa Theologica* PART I II QQ 81 83 162d 174b Q 85 178b 184a Q 9 A 6 212c 213c Q 94 A 6 REP 1 2 225d 226b Q 109 A 2 ANS 339c 340b A 3 ANS 340c 341b A 8 NS 344d 346a PART III Q 8 A 5 REP 1 760a d QQ 14 15 784 796a

21 D NTE *D in C medy* H LL IV [13 45] 5c d PURGATORY I [16 45] 56a b X [121 129] 68c d XXVIII [91] XXIX [36] 97a 98a XXX XXXI 99b 102b PARADISE II 115a 116c

22 CHAUCER *Tale of Ma of Law* [4778 4791] 240b-241a / *Pa d ers Tale* 374a 382b esp [12 432 445] 375 [2 829-837] 381b / *Par so s T le* par 13 504b 505 par 18 19 507b 508a

23 HO ES *Let tha* PART II 112a b PART III 191b c 192a c 195d

24 RA LAI *G gantua and P tagruel* K II 81a b

25 MONTAI NE *Essays* 213a 215b 218c 219a 233a 234a 238b 239c 250 b 294a b

30 B CON *N um O ganum* BK I A 1 52 195c d

32 MILTON *Parad se Lost* BK III [167 216] 139a 140 [274 3 4] 141b 142a K V [505-535] 163b-164a BK IX [780-1189] 264b 273a BK X 274a 298b e p [103 123] 276b 277a [29-409] 279b 283a [585-64] 287a 288b [720-844] 290a 292b K XI [84-98] 301a [162 18] 302b 303a [251 262] 304b 305a K XI [423] BK XII [371] 308b 327a

33 I SCAL *Provinc al Letters* 82a / *Pe sé s* 426-427 244b 430 431 245a 247b 434 435 248a 251a 439-450 251a 253a 56 272b

37 FIELDING *T m J e* 38d

40 GIBBON *Decl n and Fall* 183b-c

44 BOSWELL *Johnson* 482a

46 HEGEL *Philosophy of Right* ADDITIO S 14 118c d / *Philosophy of History* PART III 304d 305b PART IV 354a-c

50 MARX *Capital* 354b

51 TOLSTOY *War and Peace* BK VII 275a

8b The influence of religion on moral character the indispensability of divine grace for the acquisition of natural virtue by fallen man

OLD TESTAMENT *Proverbs* 21 3 / *Isaiah* 1 16-20 58 3 7—(D) *Isaias* 1 16-20 58 3-7 / *Amo* 5 21 24

APOCRYP IA *Wisdom of Solomon* 9 6 14 22 27—(D) OT *Book f Wisdom* 9 6 14 22 27 / *Eccles ast cus* 15 1 35 3—(D) OT *Ec clesiasticus* 15 1 35 5

NEW TESTAMENT *Matthew* 3 8 7 16-27 22 36-40 23 1 33 / *Mark* 7 7 13 / *Luke* 3 8 6 46-49 11 37 44 12 33 / *Joh* 14.21 15 10 / *Acts* 26 20 / *Romans* 2 17 29 3 9-8 39 pas s m / *II Co inthians* 12 7-9 / *Galatia s* 5 3 4 16-26 / *Ephes ans* 2 1-9 4 1 2 4 17 5 21 6 10-17 / *Colossians* 1 9-11 / *II Timothy* 3 16-17 / *Titus* 2 3 / *Heb ews* 10:23 13 20 21 / *James* 1 22 27 2 14 6 4 1 10 / *I Peter* 1 13 16 4 1-6 5 10 / *II Peter* 1:2 10 / *I John* 2 3 6 3 3 24

18 AUGUSTINE *Confessions* BK II par 15 12b-c / *City of God* BK IV CH 3 190 C BK V CH 19 20 224b 226a BK X CH 3 300c BK XII CH 5 362b c BK XIX CH 4 511a 513c CH 21 524a 525a H 25 528 d BK XXI CH 15 16 572c 574 / *Ch istian Doct ne* BK I CH 39 635d 636a

20 AQUINAS *Summa Theologica* PART I II Q 109 338a 347d PART III Q 61 855a 858b Q 65 A 1 879c 881d

21 D NT *Dui n Comedy* HELL I II 1a-4a IV [13-66] 5c 6 PURGATORY I 53a 54c II [1 36] 62c d IX 65d 67b XI [1 30] 68d 69a XXX XXXI 99b 102b PA ADISE VII [19-120] 115b 116b

22 C I CER *Prologue* [118 269] 161 163b [4 / 528] 167b 168a / *Pa s n s Prologue* 493b-495a / *P s s Tale* 495a 550a esp par 1 15 495a 506b

25 MON IGNE *Essays* 209c 212a 294a b

32 M TON *Sonnets* XIV 66a / *Parad se Lo t* BK I [1030 1033] 133b BK III [56-415] 136b-144b P [3 134] 138a [167 184] 139a b [22 238] 140b K XI [1 21] 299a b [251 26] 304b 305a [355 364] 307a BK XII [576-605] 331b 332a / *S mson Agonistes* [652-666] 353b-354a

33 PASCAL *P o cial Letters* 29b / *Pensées* 425 427 243b 244b 550 267a b 579 276a 668 294b 295

35 LO KE *T l n* 1b c / *Human Understand ing* BK II II S CT 5-6 105a c

8c The divine reward of v rtue and punish ment of vice here and hereafter

(8 *The relig ous aspects of virtue and v ce 8c The divine reward of v rtue and pun sh ment of vice here and he eafter*)

12 LUCRETIUS *Nature of Thi gs* BK III [9/8 1023] 42d-43b
13 VIRGIL *Ae eid* BK VI [548-627] 225b 227b [722 751] 230a 231a
18 AUGUSTINE *City f God* K V CH 15 16 220d 221b BK XIX CH 13 519a 520a CH 28 529d 530a c BK XXI 560a 586a c passim / *Christian Doctrine* BK I CH 20-21 629b
19 AQUINAS *Summa Theol g ca* PART I Q 21 124b 127c
20 AQUINAS *Summa Theol gica* PART I II Q 79 AA 3 4 158a 159c Q 87 AA 3-5 187b 189c PART III SUPPL QQ 92-99 1025b-1085a c
21 DANTE *Divine Comedy* passim
22 CHAUCER *Phys ci n s Tale* [12 2 - 2] 370b 371a / *Pa doner s Tale* 374a 382b esp [2 397-593] 374a 377b / *Monk s Tale* 434a-448b / *Parson s Tale* par 10 498b 502a
23 HOBBES *Leviath* PART II 160c 161a 163d 164a PART III 193d 195d PART IV 250c 251b 253b 255b
24 RABELAIS *Gargantua a d Pantagruel* BK II 119b 122a
26 SHAKESPEARE *Richard III* ACT I SC IV [42 63] 115a b
27 SHAKESPEARE *Haml t* ACT I SC V [9-22] 37a / *Measure for Measure* ACT III SC I [118 132] 188a
29 CERVANTES *Don Quixot* PART II 222c 227d 228d
31 DESCARTES *Med tati s* 69b
32 MILTON *Paradise Lost* BK I [1]- K II [628] 93b 125a esp BK II [85 92] 113a [477 485] 121b BK IV [1 1 3] 152b 155a K XII [101 120] 321b / *Sam n Agonistes* [667 7 9] 354a 355a [1156-1177] 364b 365a [1669-1707] 376a b
35 LOCKE *Hum n Underst nd g* K I C I II SECT 5-6 105a-c SECT 12 3 107b 108c BK II CH XXI S T 62 194c d SECT 72 198a-c CH XXVIII S CT 8 230a BK IV H XIV SECT 2 364c
35 HUME *Human Understandi g* SECT XI DIV 108 500b d DIV 114 503a
37 FIELDING *Tom Jones* 20b 21a
38 ROUSSEAU *I equality* 366c d
40 GIBBON *Decl ne a d Fall* 198d 199a
41 GIBBON *Decl ne a d Fall* 233d 234d esp 234b
42 KANT *Fu d Prin Met phys c of Morals* 264b [fn 1] / *Judgement* 594d [fn 1]
43 MILL *Liberty* 290c d / *Ut l t tan sm* 458a b
44 BOSWELL *Johnson* 363a b 482a d 514d 515a
47 GOETHE *Faust* P RT II [11 934-941] 290b
48 MELVILLE *Moby Dick* 30 36b
51 TOLSTOY *War and Peace* BK VI 272a b K XIV 606a 607a
52 DOSTOEVSKY *Brothers Karama ov* BK II 33c 34b BK V 127b 137c BK VI 146b d 170d passim BK XI 337a 346a pass m
54 FREUD *New Introductory Lectures* 878a b

8d The theory of the theological virtues

NEW TESTAMENT *I Corinthians* 13 13 / *I Thes salonians* 1 3 5 8
18 AUGUSTINE *Christian Doctrine* BK I CH 37-40 635b 636a c
20 AQUINAS *Summa Theologica* PART I II Q 58 A 3 REP 3 43b-44a Q 62 59d-63a Q 63 A 3 65a d Q 64 A 4 69b 70a Q 66 A 6 80c 81b Q 67 AA 3-6 83b-87c Q 110 A 3 REP I 350a d A 4 ANS 350d 351d PART III SUPPL Q 95 A 5 ANS and REP 2 1048a 1049d
21 DANTE *Divine Comedy* PARADISE XXIV [1]-XXVI [81] 142d 146c
23 HOBBES *Leviathan* PART III 240c d
30 BACON *Advancement of Learni g* 2c-4c
32 MILTON *Parad se Lost* BK XII [576-605] 331b-332a

8d(1) Faith and disbelief

OLD TESTAMENT *Isaiah* 7 9—(D) *Isaias* 7 9 / *Habakkuk* 2 4—(D) *Habacuc* 2 4
APOCRYPHA *Wisdom of Solomon* 3 9 14—(D) OT *Book of Wisdom* 3 9 14 / *Ecclesiasticus* 1 27 25 12—(D) OT *Ecclesiasticus* 1 34 25 16
NEW TESTAMENT *Matthew* 17 14 21 21 17 22 31 32—(D) *Matthew* 17 14 0 21 17 22 31 32 / *Mark* 5 36 9 17 30 esp 9 23 11.20-24 16 16-18—(D) *Mark* 5 36 9 16-29 esp 9.22 11 20-24 16 16-18 / *Luke* 8 4 15 17 5-6 / *John* 1 7 12 13 3 9-18 36 4 48 5 24 31-47 6 35 36 40 47 7 37 39 8:24 45 46 10.24 28 37 38 11.25 26 12 36-46 14 1 14 16 8-9 27 20 24 29 31 / *Acts* 3 16 10-43 13 38 39 15 7-9 16 30-31 / *Romans* passim, esp 1 16-18 3 21-5 2 9 30 33 10 8-17 / *I Cori thians* 1 23 2 4-5 13 2 7 13 16 13 / *II Cor nthi ns* 1 24 4 3 4 4 13-5 9 8 7 13 5—(D) *II Corinthia s* 1.23 4 3 4 4 13-5 9 8 7 13 5 / *Galat ans* passim esp 2 16 2 2 3 1 29 5 5-6 5 22 / *Ephes ans* 2 8-9 3 11 12 17 6 16 / *Philippians* 1 27 29 3 8-9 / *Colossians* 1 21 23 2 5 7 12 / *I Thessaloma s* 2 13 3 5 8 / *II The salonians* 1 3 4 2 11 12 3 2—(D) *II Thessalon ans* 1 3 4 2 10-11 3 2 / *I Timothy* 1 4 5 2 15 3 9 4 1 2 1 12 5.8 12 6 10 12 / *II Timothy* 1 12 13 2.22 3 8 10 15 4 7 / *H brews* 4 2 3 6 1 10 22 23 38 39 11 1 12 3 13 7 / *James* 1 3 7 2 1 5 14 26 / *I Peter* 1 7-9 21 2 6 7 5 8-9 / *II Peter* 1 5 / *I John* 3 23 4 1 3 14 16 5 1 4-5 9-10
18 AUGUSTINE *Co fessions* BK I par 1 1a b BK VI par 5-8 36b-37c / *City of God* BK XI H 2 323a-c BK XVI CH 23 436 -c BK XXI CH 16 573b 574a / *Chri ti an Doctrine* BK I CH 37 40 635b 636 c

19 AQUINAS *Summa Theol g ca* PART I Q I A I 3b-4a
20 AQUINAS *Summa Theologica* PART I II Q 62 AA 3 4 61c 63 Q 65 AA 4-5 73d 75a Q 66 A 6 80c 81b Q 110 A 3 REP I 350a d A 4 A s350d 351d PART II II QQ I 6380a-456d PART III SUPPL Q 99 A 4 ANS and REP I 1083a 1084a
21 D TE *Dui e Comedy* P R DISE XXIV 142d 144b
22 CH U R *P r on s Tale* par 61 529b 530a
23 H BBES *Levia han* PART I 83a b PART III 24 c 242a
25 MONTAIGNE *Ess ys* 209a 215b pas im 238c 2 9c 293d 294b
30 BA O *Advancement of Learni g* 19b c 95d 96c 100b
3 MILTON *Sonn ts* XIV 66a / *Pa adi e Lost* BK XII [5,6-60,] 331b 332a
33 PASCAL *Pens s* 248 252 219a 220a 2,6 220 286-288 224a b 5 4 261a 74, 319b 749 320a
35 LOCKE *Tole tion* 3b-4a 10c d
35 H, E *Human Understandi g* SECT X D V 100-10 496d-497b SECT XII DIV 132 509c
40 GI ON *D cline and Fall* 190d 191a
42 KANT *J dgement* 595d 596c
44 BO WELL *Joh on* 395a b 482a
46 H GE *Ph losophy of H story* PART IV 349b-350a
48 M LVILLE *Moby D ck* 30a 36b
51 TOLSTOY *W a and P ace* BK V 196a 197b
52 D T VSKY *Brothers Ka ama ov* BK II 26a 27d BK I 64c 70c K V 127b 137 P m BK V 146b d 170d pas im K X 337a 346a passim

8d(2) Hope and d spair

O D TEST I NT *N mbers* 3 6- 4 —(D) *N mbers* 13 17 4 10 / *P alms* 22 33 18-22 38 5 42 5 II 43 5 71 P m esp 71 5 7 14 19 43 49 74 8 4 47 166 130 5 7 131 3 146 5 10 147 11—(D) *P lms* 21 32 18 2 37 16 41 6-12 4 5-6 70 pas m sp 70 5 70 4 I 8 43 40 74 81 114 4, 66 129 4 7 30 3 145 5 10 46 II / *P overbs* I 28 / *Jerem h* 8 II 2—(D) *Jer m as* 18 I / *Lament t n* 3 24 26
AP C Y HA *II Ma bees* 7 14 20 15 7-9 (D) OT *II M ch bees* 7 14 15 7-9
N W T T EN *Matthew* 6 31 34 / *Acts* 2-6 24 14 15 / *R ma* 4 8 5 1-5 8 9-39 2 2 15 4 3 / *I Cori th ns* 9 3 7 13 / *II Corinthia* 4 8 / *Ephe ia* I 18 I 4 4 / *C los i ns* I 3 27 / *I The alon ans* I 3 4 13 5 8—(D) *I Thessal n s* 3 4 2 5 8 / *Tu s* 2 2 3 3 7 / *Hebr us* 3 6 6 9- o esp 6 I 6 8 / *I Peter* I 3 3 15 / *I Joh* 3 3
18 AU U TINE *C fess ns* K XIII P 14 5 114 d / *City of God* K XIX C I 4 511a 513 / *Christia D ctrin* K I 37-4 635b-636a c

20 AQUINAS *Su nma Theologica* PART I II Q 62 AA 3 4 61c 63a PART II II QQ 17 22 456d 482c PART III SUPPL, Q 9, A 5 ANS and REP 2 1048a 1049d
21 DANTE *Divine Comedy* HELL, III [1-9] 4a VI I [67]-IX [105] 11c 13b PURGATORY III [103 145] 57a-c PAR DISE XXV 144b-145d
22 C IAUCER *Parson s Tale* par 60-61 529b 530 par o 03 549a 550a

8d(3) Charity and the disorder of love

OLD TESTAM NT *Le ticus* 19 18 33 34 / *Deu teronomy* 6 5 10 12 18-19 II I 13 2 13 3 19 9 30 6 15 20 / *Joshua* 2 5 23 I —(D) *Josue* 22 5 23 II / *Psalm* passim esp 18 I 31 23 116 I 119 132 133 1-3—(D) *Psalms* pass m esp 17 30 24 114 I 118 132 132 1-3 / *Proverbs* 10 12 15 17 25 2 22 / *S g of Solomon* esp 8 6-7—(D) *Canticle of Canti les* esp 8 6 7
APOCRYPHA *Tobit* 4 13 3 12 14—(D) OT *T bias* 4 14 13 16-18 / *Wisdom of Solomon* 3 9 6 17 18—(D) OT *Book f Wi dom* 3 9 6 18 19 / *Ecclesiasticus* 2 1, 16 7 3 10 19 13 4- 5 24 8 25 I I I 27 17 34 16 47 8 —(D) OT *Ec lesiasticus* 2 18-19 7 32 I 23 13 18 19 24 4 25 25 I 14 16 27 18 19 34 19-20 47 9-10
NEW T ST M NT *Matth w* 5 21 26 38-46 19 16-21 22 35 40 / *Mark* 1 28 34 / *Luke* 6 27 36 10 25-37 / *John* 13 31 17 26 esp 13 34 35 14 15 14 21 14 23 -4 15 12 14 15 17 / *Romans* 8 35 39 I 9- I 13 8 10 / *I Cor nt ans* 8 1-3 13 I 14 I 16 14 / *II Cor thia s* 6 6 8 7-8 / *G latians* 5 6 13 15 22 / *Ephe ans* I 4 3 17-19 4 2 5-16 5 1-2 25-33 / *Philippi ns* 9 5 8 2 I 4 / *Colos si s* 2 2 3 4 9 / *I The s lo s* 3 2 4 9-0 5 8 / *II Th ssalo i n* I 3 3 5 / *I Timothy* 5 4 12 6 II / *II Timothy* I 7 13 2 22 / *T tus* 2 2 4 / *Hebrews* 4 13 I / *Jam s* 2 8 / *I Peter* I 7-8 2 17 3 8 4 8 o / *II Peter* I 7 / *I Joh* esp 5 15 10-23 4 7-5 3 / *II J h* ,-6
18 AUGUSTINE *Co f ssio s* BK IV par 7 20 20d 24c BK V P r 3 24 50b 51a BK X par 40 81c BK X P r 38-42 121b 122c / *C ty of G d* K X CH 3 300b 301 BK XIV C 7 380 381 K XV H 416 C K XXI CH 16 573b 574a / *Ch ist an Do trin* BK I H 22 629b 630 CH 8 631d 632a H 37-40 635b-636a c BK II CH 41 656 C K III CH 10 661 662a
19 AQU IA *Summa Theologic* PART Q 59 A 4 R P 3 309a 310a PART Q 4 A REP 3 630b 631a Q 26 A 3 735c 736b
20 AQUINAS *Summa Th l gica* RT Q 6 AA 3 4 61c 63 Q 65 A 2 3 72a 73d Q 66 A 6 80 81b Q 67 A 6 87 C Q 98 A 239b-240c Q 3 R 350a d A 4 AN 350d 351d Q I 4 4 373 d A 8 376 d RT I II Q 4 AA 3-5 404c 407a Q 19 A 6 469a d A

(8d *The theory of the theological virtues* 8d(3) *Charity and the disorder of love*)

10 472b d QQ 23 46 482c 605a c Q 184 A 1 629a d PART III SUPPL Q 93 A 3 1039d 1040c

21 DANTE *Divine Comedy* esp PURGATORY XV [40–81] 75d 76a XV [8] XVIII [5] 79b 80c XXX XXXI 99b 102b PARADISE III [34–90] 109d 110b XXVI [1–69] 145d 146c

22 CHAUCER *Prologue* [5 9–541] 168b / *Parson s Tale* par 30 31 517a 518b par 68–69 533b 534b par 91–9 547a b

30 BACON *Advancement of Learning* 2c 4c 80b 81a

32 MILTON *Paradise Lost* BK XII [576–605] 331b-332a / *Areopagitica* 409b 410a

33 PASCAL *Provincial Letters* 78b 80b / *Pensées* 663–670 293b 295b passim

35 LOCKE *Toleration* 1a 2c

37 FIELDING *Tom Jones* 26a 27a

44 BOSWELL *Johnson* 392b

51 TOLSTOY *War and Peace* BK I 50a BK III 127d 128d BK 213a 216d BK X 465a c BK XI 525c 526b BK XII 560a 562d

52 DOSTOEVSKY *Brothers Karamazov* BK II 26a 27d BK V 117c 137c passim BK VI 146b d 170d passim

8e The infused virtues and the moral and intellectual gifts

OLD TESTAMENT *I Kings* 3 5 15 4 9–34—(D) *III Kings* 3 5 15 4 29 34 / *I Chronicles* 2 12 —(D) *I Paralipomenon* 22 2 / *II Chronicles* 1 7 12—(D) *II Paralipomenon* 1 7 12 / *Job* 32 8 / *Psalms* 119 34 40 73 125 130 44 169—(D) *Psalms* 1 8 34 4 73 5 13 144 169 / *Proverbs* esp 2 6 / *Ecclesiastes* 2 26 / *Isaiah* 11 -5—(D) *Isaias* 11 -5 / *Daniel* 1 esp 1 7 2 20–23

APOCRYPHA *Wisdom of Solomon* 3 9 7 7 24 25 8 7 2 9—(D) OT *Book of Wisdom* 3 9 7 7 24–25 8 1 9 / *Ecclesiasticus* 1 5 11 15 15 5 24 24 8 43 33 5 29 51 7—(D) OT *Ecclesiasticus* 1 5 1 15 15 5 24 34 38 43 37 50 31 5 22 23

NEW TESTAMENT *Matthew* 6 33 / *I Corinthians* 1 30 2 / *Ephesians* 1 6–18 / *Philippians* 3 9 / *James* 1 5 7 17 3 13 8

7 PLATO *Meno* 189d 190a c

9 ARISTOTLE *Ethics* BK X CH 9 [1179^b 0–23] 434c

18 AUGUSTINE *City of God* BK X CH 1 3 300b 301 / *Christian Doctrine* BK CH 11 627b c CH 34 634b c

19 AQUINAS *Summa Theologica* PART I Q 1 3 A 1 REP 2 576a d

20 AQUINAS *Summa Theologica* PART I II Q 51 A 4 ANS 15 d Q 5 A 4 AN and REP 6 28c 29d Q 63 A 3 4 65 66c Q 68 87c 96c Q 71 A 4 ANS 108b 109 Q 100 A ANS and REP 3 264d 265d Q 110 AA 3 4 350 351d PART

II II QQ 8–9 416d 426c Q 19 465a 474d Q 45 59 c 603c

21 DANTE *Divine Comedy* PURGATORY VII [112 123] 63d 64a XXX [85 145] 100b d PARADISE XII [31 105] 124a d XX [118 129] 138a XXV [67 78] 145a

22 CHAUCER *Clerk s Tale* [8031 8037] 298a

23 HOBBES *Leviathan* PART II 149c d PART II 176d 177b 185c d 209d PART IV 270c d

8f The qualities which flow from charity humility mercy chastity obedience

OLD TESTAMENT *Genesis* 2 15 17 3 2 1 18 / *Exodus* 20 14 24 7 / *Leviticus* 20 10 / *Numbers* 12 3 / *Deuteronomy* 5 18 8 11 17 / *I Samuel* 12 14 15 15 22 3—(D) *I Kings* 12 4 15 15 22 23 / *II Samuel* 15 esp 15 3 2 26—(D) *II Kings* 15 esp 15 23 22 26 / *Job* 22 29 / *Psalms* 18 5 22 6 25 9 37 11 21 25 26 131 147 6 149 4—(D) *Psalms* 17 26 21 27 24 9 36 11 21 25 6 130 146 6 149 4 / *Proverbs* 3 3 8 13 11 2 17 14 131 15 25 33 16 5 6 18–19 18 12 20 8 21 4 1 22 4 25 27 28 25 26 29 23 / *Ecclesiastes* 7 8—(D) *Ecclesiastes* 7 9 / *Isaiah* 16 5—(D) *Isaias* 16 5 / *Jeremiah* 7 23—(D) *Jeremias* 7 23 / *Hosea* 12 6—(D) *Osee* 12 6 / *Micah* 6 8—(D) *Micheas* 6 8 / *Zephaniah* 2 3—(D) *Sophonias* 2 3

APOCRYPHA *Tobit* 14 9—(D) OT *Tobias* 14 11 / *Wisdom of Solomon* 12 19—(D) OT *Book of Wisdom* 1 19 / *Ecclesiasticus* 1 27 3 17 20 7 17 10 13 14 28 29—(D) OT *Ecclesiasticus* 1 34 3 19–21 7 19 1 15 17 31 3

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Chapter 98 WAR AND PEACE

INTRODUCTION

THE twentieth century may go down in history as the century of war and peace—the first in which world wars were fought, the first in which men established world peace, and so perhaps the last in which peace among nations was merely an armed truce, a breathing spell between wars. Even if world peace is not actually begun in our time, we may prove to be the first generation of men on earth who, under the impact of world wars, have made a firm attempt to draw a decisive conclusion from all the accumulated wisdom concerning war and peace.

It may be thought that antiquity anticipates and that at all times the tradition contains the fundamental notions which have recently gained so wide a currency. Socrates and Epictetus, for example, speak of world citizenship. Marcus Aurelius and Zeno the Stoic even more explicitly envision a world community. Alexander tries to conquer the world to make it one. Virgil proclaims a peace which will be as universal as the Roman empire, and Dante, recasting Virgil's vision, advocates the re-enactment of that empire and with it monarchy—by which he means *one* government—to give all Christendom political as well as spiritual unity.

To neglect these anticipations would be to overlook wisdom's perennial aspirations for unity. But if, because of their significance for peace, they should not be neglected here, neither should their importance be exaggerated. For one thing, man has always acted at variance with his wisdom, nullifying the hope of peace by preparing always for the next war. For another thing, it is doubtful that peace by conquest or by empire—the only ways in which the past could conceive the world's coming to the unity of peace—would be a peace perpetual as well as universal. The latter without the former is but a fraction of the ideal.

Even when in modern times the ideal is at last stated in terms of peaceful methods for achieving peace—by law, not by force; by consent, not by imposition—something less than the whole world in its global reality is the object of consideration. William Penn and Rousseau, for example, state the indispensable legal conditions for turning Europe from a continent perpetually wracked by wars into a society able to perpetuate peace, but their historical location causes them to limit their proposals to Europe.

Kant alone first makes the generalization which lies dormant in their reasoning and which almost begs to be inductively drawn from the conceptions of war and peace so plainly stated by Hobbes and Locke. He conceives the possibility of a peace not only perpetual but truly world wide. Yet for all the rightness he perceives in what he calls "the cosmopolitical ideal," it seems to remain for him an ideal—not attainable except by approximation. Yet because it is right, he holds that it must be pursued even though it is impossible. We are the first generation to argue for world peace as a conclusion on the level of reality and to conclude that it is possible because it is necessary.

The argument is not yet won, nor the conclusion enacted, but henceforth the problem of war and peace can hardly be discussed without stating the issue as a choice of world government and peace, or of world anarchy and war. If it does no more than seriously face that choice for the first time, the twentieth century makes a signal advance in understanding one of the great ideas—an advance which can change the course of history and the life of man more than the discovery of atomic fission, which is only an instrument of war or a tool of peace. But just as the release of heat and energy from nuclear combustion has its prototype in ordinary fire which the ancients associate with the beginning

of civilization so the insight which may exert a new civilizing force has its origin in the fundamental thinking man does about war and peace as soon as he begins to think about society

IN THE TRADITION OF the great books war and peace are usually discussed in political terms or at least in terms of the relation of men to one another individually or in groups But the psychologist the moralist and the theologian sometimes use the word peace in another sense to signify the absence of conflict within the individual or to signify an inner harmony—peace of mind on earth or the heavenly rest of the blessed in the presence of God

In their spiritual meanings war and peace are considered in other chapters *e g* interior conflict is a topic in the chapter on OPPOSITION and interior peace is discussed in the chapter on HAPPINESS We shall not treat these matters here except in their bearing on the social or political discussion nor shall we consider civil war except for the light it throws on the nature of war and peace in general. The special problem of discord and strife within a single community belongs to the chapter on REVOLUTION

Certain attitudes toward war between states seem to recur in every century In the face of the ever present fact of war men deplore its folly or find some benefit to compensate for its devastation But throughout most of the tradition those who see only suffering no less than those who celebrate the martial spirit seem to accept the necessity of war Good or bad or a mixture of the glorious and the horrible war seems to most of those who write about it an inevitable thing—as ineradicable as disease and death for the living body as inescapable as tragedy Only in recent times has the inevitability of war been questioned and the possibility of lasting peace proposed

The two books which look most steadily and searchingly on the face of war—Homer s *Iliad* and Tolstoy s *War and Peace*—seem to behold it as a mixed thing Battle with sword and javelin on the plains of Troy or with musket and howitzer on the Russian steppes lets loose a fury which sweeps human nature to extremes of nobility and baseness to actions of heroic strength and cringing weakness To both Homer and Tolstoy war is the realm of force and chance and though both see in it occasions for courage and magnanimity and even for a kind of charity or at least compassion the whole spectacle is one of agony pervaded by darkness and dismay *torn bodies and ruined minds* Grievous war is Homer s repeated epithet Pale fear and black death are the colors of battle They are everywhere that Ares reigns Ares blood stained bane of mortals stubborn god of war

To the poet of any century Homer or Tolstoy Virgil or Shakespeare war s human features appear to be unchanged even if its mechanical dress and physical lineaments are altered—its weapons and armor its organization of men and materials its scope of operations in space and time The historian who measures the contestants and keeps the score of victories and defeats takes a different view He dwells on all the differences which mark progress in the art of war or which enable wealthier and more advanced societies to wage wars of greater magnitude To Herodotus no military undertaking ever assumed the proportions of Xerxes army on the march raising a cloud of dust from horizon to horizon Yet Thucydides says that before the Peloponnesian War there was nothing *on a great scale either in war or in other matters*

The historian is attentive not only to weights and numbers to the changing accoutrement of war and its mechanical elaboration but also to inventions in the sphere of strategy and tactics The Alexandrian phalanx the patience of Fabius the forced marches of Caesar Hannibal s outflanking and enveloping movements at the *battle of Cannae the deployment in depth of* the Roman legions on the Rhine—these are but a few of the inventions of military genius which as Plutarch Tacitus and Gibbon recognize have an effect far beyond the advantage that novelty initially gives them They become the classical models of war s art and the *principles* of its science

Tolstoy may scoff at the historians who stand in awe of military genius He may be r— that Kutuzov s lack of plans rather than Napoleon s a r of outw tting all contingencies is the essence of great generalsh p Nevertheless Tolstoy mag n f es the campaign of 181 as beyond comparison the g eatest mass moveme of humanit

from west to east and then from east to west just as Herodotus apotheosizes the movement of the Persian horde from east to west and Thucydides the rise of Athenian naval power

Writing from the center of a whole continent in arms a century later Freud in 1915 gives his impression of what was yet to become the first world war A war of such proportions and ferocity was almost incredible before it happened Then the war in which we had refused to believe broke out and Freud writes not only is it more sanguinary and more destructive than any war of other days because of the enormously increased perfection of weapons of attack and defense but it is at least as cruel as embittered as implacable as any that preceded it It tramples in blind fury on all that comes in its way as though there were to be no future and no goodwill among men after it has passed It rends all bonds of fellowship between the contending peoples and threatens to leave such a legacy of embitterment as will make any renewal of such bonds impossible for a long time to come

THE ENEMIES OF WAR use a variety of weapons in their attack The *Trojan Women* of Euripides cries out with the bitterness of Andromache and Hecuba against the misery of war s innocent victims—the women and children who are left to mourn the vanquished or to become the victors spoils Aristophanes turns laughter rather than pity and fear against the waste of war Such comedies as the *Peace* the *Acharnians* the *Lysistrata* make light of the issues over which men fight and give war the aspect of a wearisome business preposterous in its motives and hollow in its victories

The genial satire of Rabelais exposes the impostures of war but beneath the horseplay which deflates by its exaggeration there is the earnest serious note of Grangousier s resolution not to undertake war until I have first tried all the ways and means of peace Swift s satire is not so amiable In the eyes of the truly rational Houyhnhnms war appears to be as senseless and despicable as the Yahoos who wage it Gulliver tries to tell the Houyhnhnm who is his master about the wars of Europe their causes and their cost I was going on to more particulars he relates when my master commanded me silence He said whoever understood the nature of the Yahoos might easily believe it possible for so vile an animal to be capable of every action I had named if their strength and cunning equalled their malice When a creature pretending to reason could be capable of such enormities he dreaded lest the corruption of that faculty might be worse than brutality itself He seemed therefore confident that instead of reason we were only possessed of some quality fitted to increase our natural vices

According to Augustine it is not man s nature but his sinfulness which degrades him below the beasts devoid of rational will who live more securely and peaceably with their own kind than men For not even lions or dragons have ever waged with their kind such wars as men have waged with one another Calling it the greatest and most pompous of human actions Montaigne asks whether war is not the testimony of our weakness and imperfection for, in truth the science of undoing and killing one another and of ruining and destroying our own kind has nothing in it so tempting as to make it coveted by beasts who have it not

But in his essay *Of Ill Means Employed to a Good End* Montaigne also quotes Juvenal s remark that we suffer the ills of a long peace luxury is more pernicious than war He seems to approve the Roman policy of maintaining wars not only to keep their own men in action for fear lest idleness the mother of corruption should bring upon them some worse inconvenience but also to serve for a bloodletting to their Republic and a little to evaporate the too vehement heat of their youth War as a purgative is a familiar theme Hobbes like Malthus later suggests that when all the world is overcharged with inhabitants then the last remedy of all is war which provideth for every man by victory or death

Many writers seem to be ambivalent about war Plato for example seems to see both sides of the question though he does not give them equal weight In the *Republic* Socrates proclaims the discovery that war is derived from causes which are also the causes of almost all the evils in states private as well as public In the *Laws* the Athenian Stranger admits to Cleinias the Cretan that the laws of his city devised

primarily with a view to war can be justified insofar as they aim at courage but he reminds him later that insofar as such laws regarded a part only and not the whole of virtue I disapproved of them

That he regards permanent peace as the ideal toward which the moral law commands us to strive does not prevent Kant from saying that a prolonged peace favours the predominance of a mere commercial spirit and with it a debasing self interest cowardice and effeminacy and tends to degrade the character of the nation Nor is war to be absolutely condemned Provided it is conducted with order and a sacred respect for the rights of civilians war itself says Kant has something sublime about it and gives nations that carry it on in such a manner a stamp of mind only the more sublime the more numerous the dangers to which they are exposed and which they are able to meet with fortitude Yet even while thinking that war can be a spur for developing to the highest pitch all talents that minister to culture Kant reflects that the underlying purpose of war may be to prepare the way for a rule of law govern in the freedom of states and thus bring about their unity in a system established on a moral basis

Hegel alone is not ambivalent Not only is war not to be regarded as an absolute evil but it is according to Hegel a necessary corrective for the corrosive influence of peace War is a state of affairs he writes which deals in earnest with the vanity of temporal goods and concerns—a vanity at other times the common theme of edifying sermonizing War has the higher significance that by its agency as I have remarked elsewhere the ethical health of peoples is preserved in their indifference to the stabilization of finite institutions just as the blowing of the winds preserves the sea from foulness which would be the result of a prolonged calm so also the corruption in nations would be the product of prolonged let alone perpetual peace

Far from agreeing with those who advocate perpetual peace as an ideal towards which humanity should strive Hegel points out that in peace civil life continually expands all its departments wall themselves in and in the long run men stagnate As a result of war nations are strengthened and people involved in civil strife also acquire peace at home through making wars abroad

To Prince Andrew in *War and Peace* who says that the aim of war is murder the methods of war are spying treachery and their encouragement or to Freud who says that the warring state permits itself every such misdeed every such act of violence as would disgrace the individual man Hegel has an answer States are not private persons he says but completely autonomous totalities in themselves and so the relation between them differs from a moral relation and a relation involving private rights The relation between states is a relation between autonomous entities which make mutual stipulations but which at the same time are superior to these stipulations

Self interest or a will for its own welfare pure and simple is according to Hegel the highest law governing the relation of one state to another Therefore when politics is alleged to clash with morals the doctrine propounded rests on superficial ideas about morality the nature of the state and the state s relation to the moral point of view

IN HEGEL S VIEW wars occur when the necessity of the case requires He is not alone in thinking war inevitable but others who think the same do not do so in the same mood or with the same opinion of the reason for its inevitability Drain the blood from men s veins declares Prince Andrew s father and put in water instead then there will be no more war! It is an illusion Freud thinks to suppose that civilization so transforms human nature as to lift it above the impulses of war In war he says our fellow citizens have not sunk so low as we feared because they have never risen so high as we believed The sad fact he concludes is that war is not to be abolished so long as the conditions of existence among the nations are so varied and the repulsions between peoples so intense there will be there must be wars

William James finds the human race as bellicose as its individual members are instinctively pugnacious and Alexander Hamilton says that if w judge from the history of mankind we shall be compelled to conclude that the fiery

and destructive passions of war reign in the human breast with much more powerful sway than the mild and beneficent sentiments of peace and that to model our political systems upon speculations of lasting tranquility is to calculate on the weaker springs of human character

To the extent that even those who deplore war despair of lasting peace Machiavelli may not be too cynical a realist when he advises the prince that he ought to have no other aim or thought nor select anything else for his study than war and its rules and discipline When princes have thought more of ease than of arms they have lost their states The prince ought never therefore to have out of his thoughts this subject of war and in peace he should addict himself more to its exercise than in war The prince who delays in order to save himself from war makes a serious mistake War Machiavelli tells him is not to be avoided but is only deferred to your disadvantage

Like Machiavelli Cleinias the Cretan in Plato s *Laws* justifies his city s constant preoccupation with war or preparation for war The world is foolish he thinks in not understanding that all men are always at war with one another For what men in general term peace [is] only a name in reality every city is in a natural state of war with every other not indeed proclaimed by heralds but everlasting

Both Plato and Aristotle seem to agree that war is somehow rooted in the nature of things —in the nature of men and the nature of cities Yet both also look upon war as transitory even if recurrent No one can be a true statesman the Athenian Stranger tells Cleinias who looks only or first of all to external warfare nor will he ever be a sound legislator who orders peace for the sake of war and not war for the sake of peace The whole of life according to Aristotle is divided into two parts business and leisure war and peace There must be war for the sake of peace business for the sake of leisure things useful and necessary for the sake of things honorable Men must be able to engage in business and go to war but leisure and peace are better they must do what is necessary and indeed what is useful but what is honorable is better

But how does war produce peace? One answer may be Tristram Shandy s that as war begets poverty poverty peace Another may be Virgil s In the opening book of his *Aeneid* Jove predicts the coming of a Caesar destined to bound with ocean his domain as with the stars his glory When at last Rome has conquered the world the golden age of peac —or at least the *pax Romana*—will supplant war s age of iron Then war shall be laid aside and the harsh world soften to peace the accursed gates of Battle shall be shut with iron bar and clenching bolt and godless Frenzy shall sit within upon the weapons of savagery

In accordance with this heaven laid destiny Anchises bids his son Aeneas to make war for the sake of peace Roman be this thy care—these thine arts—to bear dominion over the nations and to impose the law of peace to spare the humbled and to war down the proud[1] But some of the proud who are subjugated by Rome s legions take a different view of the peace that is imposed by force of arms Tacitus reports the speech of the British chieftain Galgacus in which he refers to those terrible Romans from whose oppression escape is vainly sought by obedience and submission To robbery slau h ter plunder they give the lying name of empire they create a wilderness and call it peace

Augustine more soberly reflects on the inevitable frustration of the Roman kind of peace The imperial city he writes has endeavored to impose on subject nations not only her yoke but her language as a bond of peace How many great wars how much slaughter and b ood shed have provided this unity And thou h these are past the end of these miseries has not yet come For though there have never been wanting nor are yet wanting hostile natio s beyond the empire against whom wars have been and are waged yet supposing there were no such nations the very extent of the empir itself has produced wars of a more obnoxious description—social and civil wars—and with these the whole race has been agitated either by the actual conflict or the fear of a renewed outbreak

Despite his perception of war s failures despite his enjoining the wise men not merely to wage but to lament the necessity of just wars, Augustine holds that it is with the desire for

peace that wars are waged Every man seeks peace by waging war but no man seeks war by makin peace For even they who intentionally interrupt the peace in which they are living have no hatred of peace but only wish it changed into a peace that suits them better Even tho e whom they make war against they wish to make their own and impose on them the laws of their own peace

Peace accord ng to Augustine consists in harmony and concord Peace between man and man is well ordered concord Domestic peace is the well ordered concord between those of the family who rule and those who obey *Civil peace is a similar concord among the citi zens* The peace of all things is the tranquil lity of order Without disagreeing essentially Aquinas explains that peace involves more than concord Wherever peace is he says there is concord but there is not peace wherever there is concord if we give peace its proper meaning The peace between men may con sist in concord not indeed any kind of con cord but that which is well ordered through one man agreeing with another in respect of something befitting to them both For if one man agree with another not of his own accord but through being forced such concord is not really peace

For men to be at peace with one another Aqu nas bel eves each must be at peace with himself but man s heart is not at peace so long as he has not what he wants or if having what he wants there still remains something for him to want This accord ng to Aquinas explains why Augustine defined peace not sim ply as concord but as *the tranquillity of order* for by tranquillity is meant all the desires of each ind vidual man being set at rest togeth er It also explains why those who seek war and dissension desire nothing but peace which they deem themselves not to have For Aqui nas reminds us there is no peace when a man enters into concord with another counter to what he would prefer Consequently men seek by means of war to break this concord because it is a defective peace in o der th t they may obtain peace where noth ng s contrary to their w ll Hence all wars are v ged th t men may find a more pe fect peace than that which they had heretofore

The fundamental insight here seems to be that though charity or love produces the unity of peace peace is also the work of justice — indirectly as Aquinas says insofar as justice removes the obstacles to peace Thucydides gives us an historian s confirmation of the theo logian s point He tells us why he considers the long truce or armistice—a period of no actual fighting—to be a part of the war Only a mis taken judgment he writes can object to including the interval of treaty in the war Looked at by the light of facts it cannot it will be found be rationally considered a state of peace where neither party either gave or got *back all that they had agreed upon*

To the same effect is the speech of Hermoc rates the Syracusan which Thucydides reports That war is an evil is a proposition so familiar to everyone that it would be tedious to develop it No one he declares is forced to engage in it by ignc rance or kept out of it by fear if he fancies there is anything to be gained by it

I suppose that no one will dispute that we went to war at first in order to serve our several interests that we are now in view of the same interests debating how we can make peace and that if we separate without havin as we think our rights we shall go to war again

THUCYDIDES OBSERVATION THAT periods of ar mistice or truce are part of war and the remark of Clemias in Plato s *Laws* that every city is in a natural state of war with every other may anticipate Hobbes but full clarity on the point is not reached until Hobbes explicitly distin guishes between war as battle and the state of war which always prevails between men or na tions when they do not live together under a common government

War consisteth not in battle only Hobbes explains or in the a t of fighting but in a tract of t me wherein the will to contend by battle is sufficiently known and therefore the notion of time is to be considered in the nature of war as it is in the nature of weather For a the na ture of foul weather lyeth not in a sho v r or two of rain but in n incl nat on th reto of many days together o the nature of War con si teth not n actual fighting but in the known dispos t on th eto dur ng all the time there

is no assurance to the contrary All other time is Peace

Hobbes does not exclude from the condition of peace differences between men or even discord but only fighting or the need to resort to fighting as a way of settling differences or resolving conflicts He is cognizant of the distinction which Machiavelli paraphrases from Cicero There are two ways of contesting Machiavelli writes the one by law the other by force the first method is proper to men the second to beasts Here Machiavelli adds the comment that because the first is frequently not sufficient it is necessary to have recourse to the second But Hobbes does not think it is always necessary At least there is a cure for the war of every man against every man That cure is the formation of a commonwealth and the institution of government with sufficient coercive force to maintain law and secure peace Anarchy and the condition of war according to Hobbes are one and the same a condition in which each man being a law unto himself and judge in his own case must of necessity resort to force if he would impose his will upon or resist the will of another

Since men are everywhere found in societies living under law and government it might seem that the universal state of war to which Hobbes refers is now abolished Not so according to Hobbes for though there had never been a time wherein particular men were in a condition of war one against another yet in his opinion in all times kings and persons of sovereign authority because of their independency are in continual jealousies and in the state and posture of gladiators having their weapons pointing and their eyes fixed on one another that is their forts garrisons and guns upon the frontiers of their kingdoms and continual spies upon their neighbors which is a posture of War

This notion that sovereigns are always in a state of war with one another—because being sovereigns they are autonomous *i e* not subject to any superior government—seems to be accepted by most of the great political writers who come after Hobbes The point is sometimes differently formulated but the basic insight remains essentially the same

Locke for example makes a threefold distinction between the state of nature which is anarchy or complete independence the state of war in which force without authority is resorted to by men to settle their differences and the state of civil society which provides law and government for the arbitration of disputes

Civil society he writes is a state of peace amongst those who are of it from whom the state of war is excluded by the umpirage which they have provided in their legislative for the ending all differences that may rise amongst any of them

Since Locke holds that want of a common judge with authority puts all men in a state of nature it follows for him that thou h the state of nature and the state of war may not be identical the state of nature unlike that of civil society inevitably lapses into the state of war If in a state of nature men fail to settle their differences by reason they enter into the state of war which is the realm of force or a declared design of force where there is no common superior on earth to appeal to for relief

With these qualifications Locke not only agrees with Hobbes that all princes and rulers of independent governments all throu h the world are in a state of nature but also draws from this the same implication for war and peace Since the whole community is one body in the state of nature in respect of all other states or persons out of its community Locke argues that the government of each state must have the power of war and peace leagues and alliances in relation to everything external to itself

Montesquieu and Rousseau slightly alter Hobbes point by attributing the origin of war itself to the existence of separate societies War writes Rousseau is a relation not between man and man but between State and State Because they are in a state of nature among themselves bodies politic experience in his opinion the inconveniences which had obliged individuals to forsake it Hence arose national wars battles murders and reprisals which shock nature and outrage reason

Hegel s ultimate reason for thinking that war is ineradicable seems to be not merely that sovereign states are in a state of nature in relation to each other but that they must always re-

main so There is no Praetor to judge between states he writes at best there may be an arbitrator or a mediator and even he exercises his functions contingently only i e in dependence on the particular wills of the disputants

That is why Hegel dismisses Kant s idea for securing perpetual peace by a League of Nations to adjust every dispute This idea Hegel writes presupposes an accord between states this would rest on moral and religious or other grounds and considerations but in any cas would always depend ultimately on a particular sovereign will and for that reason would remain infected with contingency Hence he concludes if states disagree and their particular wills cannot be harmonized the matter can only be settled by war

KANT AGREES THAT in the absence of what he calls a cosmo-political con titution or world state *war* is inevitable In their external relations to one another states like lawless savages are naturally in a non juridical condition and this according to Kant is a state of war in which the right of the stronger prevails and although it may not in fact be always found as a state of actual war and incessant hostility yet the condition is wrong in itself in the highest degree and the nations which form States contiguous to each other are bound mutually to pass out of it

How shall this be accomplished? Is Kant s idea the one Hegel attributes to him? Is the alliance of nations of which he speaks to be a league of nations or does he have something more than that in m nd when he says that this mutual connection by alliance must take the form of a Federation ?

On the one hand he calls for a universal Union of States analo ous *to that by which a* Nation becomes a State and argues that it is only thus that a real *state of Peace* could be establ shed But on the other he explains that he means only a voluntary comb nation of d f ferent States that would be *dissoluble* at any time and not such a union as is embodied in the United States of America founded upon a pol tical constitution and therefore indissoluble

The arguments for the federal constitution of the United States help to make this issue clear The authors of the Constitution regard it as providing a more perfect union than the Articles of Confederation under which the thirteen separate colonies are banded together by little more than treaties or alliances To the writers of *The Federalist* who advocate the adoption of a federal union to replace the loose confederacy or league of states there is no middle ground between the establishment of peace through federal union and the continuation of the state of war between separate states

A man must be far gone in Utopian speculations Hamilton declares who can seriously doubt that if these States should either be wholly disunited or only united in partial confederacies the subdivisions into which they might be thrown would have frequent and violent contests with each other To look for a continuation of harmony between a number of independent unconnected sovereignties in the same neighborhood would be to disregard the uniform course of e ents and to set at defiance the accumulated experience of ages In another paper Hamilton admits that there is nothing absurd or impracticable in the idea of a league or alliance between independent nations for certain defined purposes precisely stated in a treaty but he thinks that Europe has tau ht an instructive but afflicting lesson to mankind how little dependence is to be placed on treaties which have no other sanction than the obligations of good faith

He returns therefore to attack the visionary or designing men who stand ready to advocate the paradox of perpetual peace between the States though dismembered and alienated from each other What reason have we to expect he asks pea e and cordiality between the members of the present confederation in a state of *separation ? It seems to him an established* truth that the several states in th case of dis un on ould be subject to those vicissitudes of peace and war or fr endship and enmity with each other which have fallen to the lot of all neighboring nations not united under one government

The Federalists do not seriously recommend their prescription for peace as a plan for the whole world Yet they see the generalization that is impl cit in all their reasoning Happy would it be Mad son says if such a remedy

for its infirmities could be enjoyed by all free governments if a project equally effectual could be established for the universal peace of mankind!

John Stuart Mill writing somewhat later and in the light of the experience of American federation as a peace plan seems to be even less ready to propose world federal government as the indispensable condition of world peace He has no doubt that federal union puts an end to war and diplomatic quarrels But he does not think that abrogating the distinction between fellow countrymen and foreigners by making them all fellow citizens of an encompassing state—an object which is one of the worthiest to which human endeavor can be directed —can in the present state of civilization be promoted by keeping different nationalities of anything like equivalent strength under the same government

Not only does Kant definitely dismiss the notion of a world union formed along American lines but even that less perfect union of states which would have the form of a *Permanent Congress of Nations* seems to him an impracticable idea in the world as it is at the end of the eighteenth century With the too great extension of such a Union of States over vast regions he writes any government of it and consequently the protection of its individual members must at last become impossible and thus a multitude of such corporations would again bring round a state of war

Nevertheless Kant refuses to yield completely to this conclusion The morally practical reason he affirms utters within us its irrevocable *Veto There shall be no War* Hence the question no longer is as to whether Perpetual Peace is a real thing or not a real thing or as to whether we may not be deceiving ourselves when we adopt the former alternative but we must *act* on the supposition of its being real We must work for what may perhaps not be realized and thus we may put an end to the evil of wars which have been the chief interest of the internal arrangements of all States without exception

And in his *Idea of a Universal History on a Cosmo Political Plan* Kant does more than urge upon us our moral duty to work for perpetual peace as prerequisite to the highest political good He engages in prophecy He pictures the nations of the world after many devastations overthrows and even complete internal exhaustion of their powers as driven forward to the goal which Reason might well have impressed upon them even without so much sad experience This is none other than the advance out of the lawless state of savages and the entering into a Federation of Nations

However visionary this idea may appear to be it is nevertheless the inevitable issue of the necessity in which men involve one another

THE ARGUMENT FOR WORLD GOVERNMENT as the means to world peace is nowhere made in the great books as explicitly as in Dante s *De Monarchia* Wherever there can be contention Dante writes there judgment should exist otherwise things should exist imperfectly without their own means of adjustment or correction Between any two governments, neither of which is in any way subordinate to the other contention can arise either through their own fault or that of their subjects This is evident Therefore there should be judication between them And since neither can know the affairs of the other not being subordinate (for among equals there is no authority) there must be a third and wider power which rules both within its own jurisdiction

This third power Dante continues is either the world government or it is not If it is we have reached our conclusion if it is not it must in turn have its equal outside its jurisdiction and then it will need a third party as a judge and so *ad infinitum* which is impossible So we must arrive at a first and supreme judge for whom all contentions are judicable either directly or indirectly Therefore world government is necessary for the world Aristotle according to Dante saw this argument when he said Things hate to be in disorder but a plurality of authorities is disorder therefore authority is single But Aristotle certainly did not draw the conclusion that a single government embracing all mankind should be instituted so that by common law it might lead all toward peace Nor with the exception of Kant does any other great author argue to this conclusion But as we have seen Kant unlike

Dante reaches this conclusion only to qualify his acceptance of it and his advocacy of world government

Nevertheless several of the great books do contain the nerve of the argument It is contained in one fundamental proposition that is variously enunciated by Hobbes and Locke Rousseau and the Federalists That proposition is *As anarchy leads to war government establishes peace and just laws preserve it* By inductive generalization it seems to follow that if local peace depends on local government world peace depends on world government

But if except for Dante and Kant no one until the present made this inference the tradition of western thought does include not only the essential premise for making the inference but also the controlling vision of a politically united humanity—all men as fellow citizens in a single political society embracing the earth

Kant speaks of the right of man as a citizen of the world to *attempt* to enter into communion with all others Epictetus says there is but one course open to men to do as Socrates did never to reply to one who asks his country I am an Athenian or I am a Corinthian but I am a citizen of the universe

Reflecting on the fact that man s nature is rational and social Marcus Aurelius declares My city and my country so far as I am Antoninus is Rome but so far as I am a man it is the world If we look at what value every thing has with reference to the whole we will perceive that man is a citizen of the highest city of which all other cities are like families The reason which is common to all men dictates a common law of human life If this is so Aurelius argues we are fellow citizens if this is so we are members of one political community if this is so the world is in a manner a state

Aristotle describes how the family is formed by the union of man and wife parents and children and from this first of all social units the tribe or village is formed by a union of families and the city or state by a union of villages He does not carry this series on to its natural terminus but Augustine does After the state or city Augustine says comes the world the third circle of human society—the first being *the family the second the city*

Yet Augustine who orders earthly peace to the peace of heaven does not prophesy a single political community of all men living together under one government The heavenly city he says while it sojourns on earth calls citizens out of all nations and gathers together a society of pilgrims of all languages not scrupling about diversities in the manners laws and institutions whereby earthly peace is secured and maintained but recognizing that however various these are they all tend to one and the same end of earthly peace

One and the same end of earthly peace may require one city of man as well as one city of God That according to Dostoevsky seems to be implied in the fact that the craving for universal unity is the third and last anguish of men Mankind as a whole he writes has always striven to organize a universal state There have been many great nations with great histories but the more highly developed the more unhappy they were for they felt more acutely than other people the craving for world wide union

OUTLINE OF TOPICS

REFERENCES

To find the passa es cited use the numbers in heavy type which are the volume and pa e numbers of the passages referred to For example in 4 HO IER *Il ad* BK II [265 283] **12d** the number **4** is the number of the volume in the set the number **12d** indicates that the pas sage is in section d of pa e 12

P GE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lo er hal es of the page For example in **53** JAMES *Psychology* **116a 119b** the passage beg s in the upper half of page 116 and ends in the lower half of page 19 When the text is printed in t o c l mns the letters a and b refer to the upper and lo ver halves of the left hand s de f the page the lett rs c and d to the upper and lo ver hal es of the right hand s d of the pa e For example in **7** PLATO *Symposi m* **163b 164c** the passage begins in the lower half of th left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One or more of the main divisions of a work (such as P RT BK CH SECT) a e so netimes included in the reference line numbers in brackets are given in cer tain cases *e g Iliad* BK II [265-283] **12d**

BIBLE R FERENCES The references re to book chapter and verse When the King James and Douay ve sions differ in title of books or in the numbering of chapters or verses the King James versi n is cited fi st and the Dou y indicated by a *(D)* follows *e g* OLD TESTA MENT *Nehemiah* 7 45—*(D) II Esdras* 7 46

S M OLS The abbreviation esp calls the reader s attention to one or more especially rel vant parts of a whole reference passim s gnifies that the topic is discussed interm t tently rather than continuously in the work or passage cited

For additional inf mati n concerning the style of the references see the Expl nation of Ref re ce Style for general guidance in the use of *The G eat Idea* consult the Preface

1 War s the reign of force the st te of war and the state of n ture

4 HO IER *Il ad* **3a 179d**

5 AESCHYLUS *Agamemnon* [437 444] **56d**

5 EUR P ES *Ph eni ian Maiden* [784-800] **385a b**

6 THUC DIDES *Pelopo nes an War* BK V **488d 489b**

7 PLATO *P otagoras* **44c d** / *Laws* BK I **640d 641a**

9 ARIS OTLE *Politics* BK I CH [1253 7] **446b**

13 V RGIL *Aeneid* K II **124a 146b** K VII X **236a 379b**

18 AUGUSTINE *City of God* K XIX CH **517d-518** CH 28 **529d 530a**

20 AQUINA *Summa The l g* P RT I II Q 105 A 3 ANS and R 1 **316 318b** ART I II Q 9 A 2 R P 2 **531a d**

22 CH UCER *Kn ght s Tale* [981 2050] **192b 193b**

23 M CH V LLI *Prince* H XVIII **25a b**

23 HOB *Lei ath n* PART **76d 77a 84 86b 86d 92** P RT **99 100a 102d 104b-d 114b-c 153b 159c d**

26 SHAKES EARE *Richard III* ACT I SC I [13] **105b**

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30 BA ON *Ad ancement of Lea ni g* **20 d**

31 S INOZ *Eth cs* PART IV PRO 37 SCHOL 2 **435b 436a**

32 MI TON *Paradise Lost* BK I [6 2-662] **107a 108a** BK XI [634-707] **313a 314b**

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38 MONT SQU EU *Spi it f Laws* BK **2b 3a** K XXVI **223c d**

38 ROUSSEAU *I equality* **335b 336a 343a 345 346b d 351b 352a 353d 356 361c 362 364a b** / *Polit al Ec nomy* **370d** / *Soc al Co tract* K **389d 390d** BK **398a b**

41 GI BON *D cl nd F ll* **237c d**

42 KANT *P r R n* **222b** / *S ence f Right* **434b c 435 -436b 450d-451 452a d 454a 455**

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2a Civil war and war between states or inter national war

2b Religious wars the defense and propaga tion of the faith

2c The class war the confl ct of economic g oup

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7 PLATO *Republ* BK IV 342d 344a BK VIII 405c-406b 412d 415a
9 ARI TOTLE *P l tics* BK II CH 6 [1265b6-12] 461 CH 7 461d 463c passim CH 9 [1269 37-b 3] 465c d BK V C II [1295b2 1296b2] 495 -496c BK V 502a 519d pas m e p CH 5 6 506b 508c / *Athenia Constitution* H 2-5 553a 555a
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5 AE HYLUS *S ppl a t M dens* [333 479] 5a 7 [825-953] 11d 13 / *P* [739-83] 23a 24a
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7 PLATO *Republic* BK I 307a 308c
9 ARISTOTLE *Politics* K I CH 8 [1256b20-26] 450c
14 PLUTARCH *Numa Pomp l us* 55c 56a / *Cam l lus* 108b 109a
15 TACITUS *Histories* K IV 272b c 290a-c
18 AUGUSTINE *City of God* BK I CH 21 142d 143 BK IV CH 14 15 196b 197a BK XIX CH 7 515a c
20 AQUINAS *Summa Theol g ca* PART I II Q 105 A 3 ANS 316a 318b PART II-II Q 40 A 1 578a 579b A 2 REP 3 579b 580c Q 41 A 1 REP 3 581d 582c Q 42 A 2 RE 1 3 584b d
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23 MACHIAVELLI *Prince* CH XXVI 36b 37a
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3b J st e nd xp diency n relat on to the n t on nd p o cut on of war laws go ning th conduct of w rf re

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7 PLATO *Rep blic* K V 367b 368c

(3 *The rights of war 3b Justice and expediency in relation to the initiation and prosecution of a war laws governing the conduct of warfare*)

13 VIRGIL *Aeneid* BK XI [242 444] 334b 340a BK XII [1–53] 354a 355b
14 PLUTARCH *Themistocles* 96c d / *Camillus* 106b 107a 108b 109a / *Marcellus* 254c 255b / *Pyrrhus* 319b d / *Lysander* 357a b / *Cimon* 397c 398d / *Nicias* 426a / *Agesilaus* 484a b 491a b / *Alexander* 549d 550c 569a b / *Demetrius* 727d 728b / *Marcus Brutus* 821b d
15 TACITUS *Annals* BK I 15b
18 AUGUSTINE *City of God* BK I CH I 7 129d 133a
20 AQUINAS *Summa Theologica* PART I II Q 105 A 3 ANS and REP 4 316a 318b PART II II Q 4 AA 3 4 580d 581d
23 MACHIAVELLI *Prince* CH XXI 32a d
23 HOBBES *Leviathan* PART I 95a PART II 110b 111a 147c CONCLUSION 279d 281a
25 MONTAIGNE *Essays* 11b 13c 22d 23b 95a 97a 334b 336c
26 SHAKESPEARE *King John* ACT II SC I [561 598] 385c 386a ACT III SC I [255 347] 388d 389d / *2nd Henry IV* ACT IV SC II [52 123] 490b 491b / *Henry V* ACT I SC II [1 233] 534a 536b ACT III SC III [1 43] 545d 546a ACT IV SC V [1–68] 558d 559b
27 SHAKESPEARE *Coriolanus* ACT V SC III [94 171] 388a d / *Timon of Athens* ACT V SC IV [1 64] 419d-420c
35 LOCKE *Civil Government* CH XI SECT 139 57c 58a CH XVI 65d 70c
38 MONTESQUIEU *Spirit of Laws* BK I 3a b BK X 61b d 63d BK XV 109b-c 110a c BK XXIV 201b c
38 ROUSSEAU *Social Contract* BK I 3 9d 390d BK I 395d
40 GIBBON *Decline and Fall* 404a b 409b d 509b c 543c 549d 550b
41 GIBBON *Decline and Fall* 5d 6a 7d 8a 17d 18c 27b 28b 130b c 373d 374d 445 532d 533a 729a [n 86]
42 KANT *Science of Right* 434d 452c 455c esp 454 c / *Judgement* 504 b
43 DECLARATION OF INDEPENDENCE [84–94] 2b-3a
43 ARTICLES OF CONFEDERATION VI [124 146] 6c d IX [86- 91] 7b
43 CONSTITUTION OF THE U S ARTICLE I SECT 8 [22 225] 13b SECT 10 [296–298] 14a [314 320] 14b
43 FEDERALIST NUMBER 6 40a b NUMBER 1 54c
46 HEGEL *Philosophy of Right* PART III par 338 339 110a b ADDITIONS 193 150
51 TOLSTOY *War and Peace* BK IX 344b 355c BK X 442c-443b BK XII 547a 551 BK XIV 589a c 593b-599b
54 FREUD *War and Death* 756c 757c

4 The causes or occasions of war

4a The precipitation of war between states remote and proximate causes real and apparent causes

4 HOMER *Iliad* BK II [155 18] 11c d BK VII [344 378] 49c d BK XIII [345 360] 91d 92a
5 AESCHYLUS *Suppliant Maidens* [333 4 9] 5a 7a [825–953] 11d 13a / *Agamemnon* [399–455] 56b 57a [681 749] 59b 60a
5 EURIPIDES *Suppliants* 258a 269a c esp [399-597] 261d 263c / *Phoenician Maidens* [357 637] 381a 383d / *Iphigenia at Aulis* [49–85] 425c d
5 ARISTOPHANES *Acharnians* [480–565] 460d 461c / *Peace* [195 222] 528a c [601–692] 532d 534a / *Plutus* [144 197] 630d 631b
6 HERODOTUS *History* BK I 1a 2c 10a 11b-c 16b c BK II 71a 73b BK III 89a d 99c 100a 118a c 119c 120b BK IV 146a b 152b c 154a b BK V 165a 166a 174b 175b 175d 177b 180c d 182b BK VI 202c 203d 211a b 212a c BK VII 214d 220b BK VIII 280b d 283a b
6 THUCYDIDES *Peloponnesian War* BK I 349a 386d esp 349b d 353c d 354d 355a 362d 363a 365a b 371b BK III 418d 419d BK V 491c-492b 493c-496b 497b BK VI 510c 511a
7 PLATO *Phaedo* 224d / *Republic* BK II 318c 319 BK VIII 413d 414d esp 414c / *Statesman* 605d 608d
8 ARISTOTLE *Posterior Analytics* BK II CH II [94 36-b8] 129a b
13 VIRGIL *Aeneid* BK VII 236a 258b
14 PLUTARCH *Numa Pompilius* 57d 60b / *Camillus* 108b 109c / *Pericles* 130d 137c / *Coriolanus* 179c 180b / *Pyrrhus* 319b d / *Lysander* 366b c / *Demetrius* 727d
15 TACITUS *Annals* BK VI 94a d BK XII 122a c BK XIII 134a BK XV 157d 158b 163c 164a / *Histories* BK I 207b c
18 AUGUSTINE *City of God* BK III CH 10 172d 173c CH 13 14 174c 176d BK V CH 12 216d 218a BK XIX CH 7 515a c
20 AQUINAS *Summa Theologica* PART II II Q 29 A 2 REP 2 531a d Q 4 A 1 ANS 578a 579b
23 MACHIAVELLI *Prince* CH XXI 31d 32d
23 HOBBES *Leviathan* PART I 76d 77a PART II 157a
24 RABELAIS *Gargantua and Pantagruel* BK I 30d 32c
25 MONTAIGNE *Essays* 299d 300c 330b 331a
26 SHAKESPEARE *King John* ACT II SC I 386a 389d esp [253 297] 388d 389b / *Henry V* ACT I 533a 537b
27 SHAKESPEARE *Troilus and Cressida* ACT II SC II 113 115d
29 CERVANTES *Don Quixote* PART II 290a d
32 MILTON *Paradise Lost* BK XI [634 707] 313a 314b

35 LOCKE *Tolerat o* 13c d
36 SWIFT *Gulliver* PART IV 150a 151b
38 MONTESQUIEU *Spir t of La vs* BK X 61b d 62a
38 ROUSSEAU *Pol t cal Economy* 380a / *Social Contract* K II 403c-404b
40 GIBBON *Decl e and Fall* 95b 98d 100c 101b- 103a 110c passim 119d 148b-149d pass m 261c 264d 265a 558a 572a passim esp 558a c 571b d 572a
41 GI ON *Decl ne and Fall* 1a 2d pass m 46c 47a 380b 384b 531d 534a pas im esp 531d 532b 539d 541c
43 ARTI LES OF CONFED RATION III 5b VI [1 4 146] 6c d
43 F DERALIST NUMBER 3-7 33b 44c passim NUMBER 18 20 71 78b passim NUMB R 24 88d 89a NUMBER 34 110b d NUMBER 80 235b 236a
46 HEGEL *Ph losophy of Right* PART III par 334-335 109c d / *Ph lo ophy of Hi tory* PART I 232b PART I 262c 263a 274a 275b 278c 281b PART IV 357a 358b
51 T L TOY *W ar nd P ace* BK IX 342a 355 BK X 389a 391c BK XI 469a-472b BK X I 563a b E LOGUE I 645a 650 EPILOGUE II 675a 696d pass m
54 F EUD *War and Death* 755 761a-c 766b d / *C vil zation a d Its D cont nts* 788b d

4b The factor responsible for ci il strife

5 A SCHYLU *Eum nides* [848-869] 89d 90a
6 H RODOTUS *History* BK I 29d 30b BK IV 124 d 126a b
6 THUCYD ES *Pelop nnesian War* K III 434 -4 8b K IV 460 d BK V 482d-483a BK VI 568d 569
7 P ATO *R p bl* BK IV 342d 344a BK V I 408b 409b / *Statesman* 605d-608d / *L ws* BK III 668d 676b / *Se th Letter* 814b
9 A IST TLE *Pol tics* BK II CH 6 [1265b6-12] 461a CH 7 461d-463 pass m CH 9 [1269 37 b13] 465 d K IV H { 295b2 1296b] 495c-496c BK V 502 519d pass m
12 LU RETIU *Nature f Th g* BK III [68 73] 31a
14 PLU R H *Th seu* 13a 14 / *Solon* 68d 69d / *C millus* 117c 121a / *Per l* 124a 130b esp 126d 127a / *Coriolanus* 176b 184c / *Sulla* 369a 374 / *Caesar* 581d 582a / *Ag s* 648b d 656d / *Cl men s* 657 663c / *Ti ber us G c hus* 671b d 681a c esp 680b d / *Ca us Gra hus* 681b d 689 / *C* 708 713b / *A tony* 750a b / *G lb* 859a c
15 TA ITU *A l* BK 4a d 10d 11b / *H s to es* BK I 190 191 195a 196b 198d 199c 202 205a BK I 215d 216b 224d 225a
18 AU TINE *C ty of G d* BK XIX H 7 515a-c
21 DANTE *D me C m dy* H VI [58 75] 9a PURGATORY X [6- 6] 73d 75a
23 MACHIAVELLI *Pri ce* CH III 3c 5a CH IV V 7a 8c CH VI 9b d CH VIII IX 14a 16a CH XVII 23d 24d CH XIX 26a 27a CH XX 31a
23 HOBBES *Leviathan* PART I 77a 78c d PART II 102d 103a 103c 104a 114d 115a 116c d 148c 153a 157d 158a 159a c PART III 240a b PART IV 247a 248d 270c d 273a c 276c 277a 278c CONCLUSION 280c 281a
25 MONTAIGNE *Essays* 48b-51a
26 SHAKESPEARE *1st Henry VI* 1a 32a c esp ACT II SC IV-ACT III SC I 11b-16b ACT IV SC I [III 194] 21a d / *2nd Henry VI* 33a 68d esp ACT I SC I 33b d 36b ACT II SC II 43 -44c / *3rd He ry VI* 69a 104d esp ACT V C VI VI 103b-104d / *Richard III* ACT V SC I I [237-27] 146b c / *Rich rd II* 320a 351d esp ACT I SC III [123 138] 324d 325 ACT IV SC I [107 157] 342c 343a / *K ng John* ACT IV SC III [140]-ACT V SC I [79] 399a-400a / *1st Hen y IV* 434 466d esp ACT IV SC I [41 113] 459d 460b ACT V SC I [I 120] 460d-462a / *2nd Henry IV* ACT I SC III [85 110] 473d-474a ACT IV SC I [30]-SC II [42] 487c-490a / *Jul us Ca s r* 568a 596a esp ACT II SC I [112 183] 575d 576b ACT III SC I [78 110] 581b c [253-275] 583b
27 S AKESPEARE *Tro lus and Cressida* ACT I SC III [75 137] 108d 109c / *Macbeth* ACT IV SC III [1 135] 303b 304d / *Anto y and Cl opatra* ACT I SC III [41 53] 315a b CT III SC IV 329b d / *Coriol nus* ACT I SC I [1 226] 351a 353d / *Cymbeli e* A T III SC I 463c-464c
30 B CON *Adian ement f Learn ng* 7a
35 LOCKE *Toler t* 7b 18c 19d 20c 21 / *C l Government* CH XVIII S T 203 10 72a 73c CH X X ECT 2 4 243 76d 81d
36 STERN *T ist am Sha dy* 338a 339
38 MONT SQUIEU *Spir t f Laws* BK V 28b 29a BK VI 54b K X 65b BK XV 112d 113a K XIX 137 139b
38 ROUSSEAU *Inequal ty* 361b 362a / *Social Contr t* BK III 411b 417b c
39 SM TH *Wealth of Nat ns* BK IV 269d 271a BK V 08b c 348a 352a
40 GIBBON *Decl ne and Fall* 35a 48d 49a 69a 76a esp 69a b 71c d 73b c 111b 112c pas m, esp 112b 113c 116b-c 127a 159b d 178d p ssim esp 159b d 267a 272a c pass m 324d 326b esp 326b 330a 335 esp 334b d 420b 422d esp 420c d 446b 447d 449d 450a 453 -454c 652d 654c
41 G B ON *D li e and Fall* 51a 53a 113d 115 466 b
43 DECLARATION O IN EP ND NC 1a 3b
43 F DERALIST NUMB R 9-10 47a 53a NUM R 16 66c 68d NUM ER 7 95b c NU ER 58 181d 182 NUMBER 6 184b d
43 MILL *Liberty* 321b / *Repr entat Govern n ent* 425b-426b 428b-431 pass m
46 H GEL *Ph lo phy f Hi t ry* PART I I 295d 296c PART V 345a b
50 M RX *Cap tal* 7b 377c 378d esp 378c

(4 *The causes or occasions of war 4b The factors respons ble for civ l strife*)

50 MARX ENGELS *Communist Manifesto* 416c d
51 TOLSTOY *War and Peace* EPILOGUE II 680b 683b
54 FREUD *Civilization and Its Discontents* 787c 788d esp 787d 788a

5 The effects of war

5a The moral consequences of war its effects on the happiness and virtue of men and on the welfare of women and children

OLD TESTAMENT *II Kings* 25—(D) *IV K ngs* 5 / *II Chronicles* 36 17 21—(D) *II Para lipomenon* 36 17-21 / *Jeremiah* 39-40 52—(D) *Jerem as* 39-40 52
APOCRYPHA *I Ma cabees* 1 20-64—(D) OT *I Machabees* 1 21-67
4 HOMER *Il ad* K VI [369 502] 43d 45a BK XVIII [1 137] 130a 131c BK XXIV 171a 179d esp [689 ,81] 178c 179c
5 A SCHYLU *Pers ns* [101 124] 16c d [515 597] 20c 21b / *Seven Against Thebes* [78 368] 28 31b / *Agamemnon* [183 257] 54a d [3 0-350] 55c d [399-474] 56b 57b [855 905] 61b c
5 So HOC ES *Ajax* [1185 1222] 153b c
5 EURIPID *Suppl ant* 258 269a c / *Trojan Women* 270a 281a c / *A dromache* [91-116] 316a b / *Hecuba* 353a 364a c
5 ARISTOPHANES *Pea e* [601-656] 532d 533c / *Ly trata* 583a 599a c e p [587-599] 590d 591a
6 HERODOTUS *History* BK I 20d 21a BK III 121c d
6 T UCYDID *Peloponnesian W* K II 392a b 398c d BK III 436d 438b BK VII 545d 546a 559b d 562c 563a c
7 P ATO *Laws* K I 648b c BK IV 677d 678c
9 ARISTOTLE *Politics* K VII CH 15 [1334 12 b7] 539 b
13 V RG L *Aene d* K II [268 804] 131b 146b
14 PLUTARCH *Ca a* 590d 591a 592a c 598c
15 TACITUS *A n ls* BK I 12b 13b 18a / *His to ies* BK I 202b c BK I 217c 218a 226c d 229b c BK 248 d 50a 251a 255b c 265a b BK IV 266b c
18 AUGUSTINE *C ty of God* BK III CH 13 174c 175b K XIX H 7 515 c
20 AQUINA *Summa Th ologica* PART II II Q 4 A 2 N 579b 580c
21 DANTE *D ti Comedy* PURGA ORY VI [58 151] 61b 62
22 CH UCER *Kn ght s Tale* [859-1004] 174a 176b / *Tale of M l beus* par 12 404a b
24 P B LAIS *Garg ntua and Pant gruel* K I I 140c 141 143a 144c
25 MONTA G E *E s y* 95 97a 504c 509a
26 S I K E E *I t H n y I I* C I C V VII 23d 26 / *2nd Henry VI* ACT V SC [3 -65] 67d 68a / *3rd Henry VI* ACT I SC IV 74c 76b ACT II SC V 81d 83a / *Richard III* ACT V SC V [16-41] 148a c / *Henry V* ACT III SC III 545d 546b ACT IV SC I [95 246] 552c 554a ACT V SC II [24-67] 563c 564a / *Julius Caesar* ACT III SC I [262-275] 583b
35 LOCKE *Civil Government* CH XVI SECT 180-189 67b 69b passim
36 STERNE *Tristram Shandy* 448b 451a
38 ROUSSEAU *Inequality* 355c 364c d / *Pol tical Economy* 380a d / *Social Co tract* B III 418a b [fn 1]
39 S ITH *W ealth of Nations* BK V 301b c
40 GIBBON *Decline and Fall* 35a 112d 113a 409b d 509b 510c 511c 512a 573b 574 627d 628a
41 GIBBON *Decline and Fall* 397c 398a 437b-440a c passim 551d 553a
42 KANT *Science of Right* 454a c / *Judgement* 504a b
43 DECLARATION OF INDEPENDENCE [80-94] 2b 3a
46 HEGEL *Philosophy of Right* P RT III par 4 107a d ADDITIONS 193 150c
51 TOLSTOY *War and Peace* BK I 12b 14b 50d 55c 59d BK II 76a b 90c 91a 102d 10 109d 110a c BK III 128d 131c 141d 142 155b 156d 162b 164a c BK I 179b 180d BK V 221d 222b 225c 228b 232a 234a BK VII 275a 276b BK IX 342a BK X 410c 421c 442 443b 467a 468a c BK XI 475b 476c 485a 496a 497c 513d 527b 532a c BK XII 537b 562d EPILOGUE II 675d 676a
52 DOSTOEVSKY *Brothers Karama ov* BK VI 166c 167b
54 FREUD *Wa and Death* 756d 761a esp 756d 757a 757c 760d 761a 764c d 766

5b The polit cal consequences of war its effects on d fferent forms of government

5 ARISTO HAN S *Knights* [790-809] 479c-480a / *P ace* [601-656] 532d 533c
6 HERODOTUS *Hist ry* BK II 118a c
6 THUCYDIDE *Pelop n esian War* BK VII 564a 593a c esp 575c 576c 577b d 579c 581c 582 c
9 AR TOT E *Pol tics* BK CH 3 [303 2 1] 504b c CH 7 [1306b32 1307 2] 508d CH II [1313b28 9] 516c / *4th ian Con titution* CH 29 566b d
14 PLUT RCH *Camill* 106b 119a 120c / *Co olanus* 179c d 186d / *Flami us* 307d 308a / *Caius M rs* 332b d 354a c / *Sulla* 368a 387a c / *Ca s* 590d 591a
15 TACITUS *A als* BK I 1b c
35 LOCKE *C vil Governme t* CH XVI 65d 70c esp SECT 175 65d CH XIX SE T 2 1 73d 74a
38 MONTE QUI U *Sp t of Laws* BK IX 60b 61a 61b K X 64 65b
38 ROU E U *P l t cal E onomy* 380a d / *Social Cont ct* K II 403c 404a BK I I 418a b [fn 1]

41 CIBBON *Decli e and Fall* 452d-453a c
43 DECLARATION OF IND PENDENCE [80-81] 2b
43 CO STITUTION OF THE U S ARTICLE I SECT 9 [267 270] 13d AL ENDM NTS XIV SECT 2 4 18d 19a
43 F RALIST NUMBER 8 45a 47a NUMBER 16 68d NUMBER 8 20 71a 78b passim NUMBER 4 133b d NUMBER 58 181d 182a
54 FR UD *New Introductory Lectures* 882d

5c The economic conseq ences of war the cost of war and the by products of war

5 ARIST HANES *Peace* [601-656] 532d 533c [197 1 64] 540a d
6 HERO OTU *H story* BK VII 235c 236a 249d
6 THUCYDID S *P lopo esi War* BK I 349b-d 354d 355a BK II 390c 391c 399b-401b BK III 420d BK VII 551b-d K V I 564a c
9 A ISTOTLE *Politics* BK V CH 7 [306^{b}32 1307^{a}2] 508d
14 PLUTARCH *C riolanus* 179c 180b
15 TAC TL *Hist es* BK I 213d 214a BK II 229b 236d 237 BK III 250b c
25 M NTA GNE *Ess ys* 504c 509a
26 S AK AR *Henry V* ACT V SC II [3-67] 563c 564a
35 LOCKE *C l Goiernm nt* H XVI S T 180-184 67b 68d
36 ST RNE *Tri tr m Sh ndy* 225a
38 MON E QUIEU *Spir t f Laws* BK XI 100d 101a
38 R USS AU *P l t c l Eco my* 380 d / *Social C ntract* BK II 418 b [fn 1]
39 SMITH *Wealth f N t n* BK II 181a BK V 262 c
40 GI BON *D clin and Fall* 114a 409c d 428b d 503d 504 510d 511 pa m 541d 542a 584d
41 GI B N *Decl e d Fall* 2b 133c d 437c 438c 45?d-453a c
42 KANT *J d em t* 586c d
43 D CLARAT ON OF INDE ENDENCE [8 -94] 2b 3a
43 AR I L OF CON D ATION [15? 167] 6d 7a
43 C NSTITUTION O TH U S AMEND I N XIV CT 4 19a
43 F ERALI T NUM 54b c NU ER 5 91 b NUM B R 30 102d 103a NUM R 34 110d 111b
51 TOL TOY *Wa a d P* K X 490 500d 502 BK XV 634a 635 PILOGUE II 675d 676a

6 The conception of war as a political m ans o n trument

6a Conque t emp re pol t cal xp ns on s ends of war

OLD TESTAMENT *Joshua* 6-12 (D) *J su* 6-12 / *Judge* 8
APOCRYPHA *Judith* 1 2-(D) OT *Judith* 1 2 / *I Maccabees* 1 16 24-(D) OT *I Macha bees* 1 17- ?
5 AESCHYLUS *Persians* 15a 26d esp [8?2-908] 24b d
6 HERODOTUS *Histor* BK I 16b c 46a BK III 118a c BK IV 138d 159d passim BK V 161c 162b 165a 166a 169a c BK VI 211a b BK VII IX 214a 314a c passim esp BK VII 214a b 214d 216b BK IX 305d 306a 314a
6 THUCYDIDE *Peloponn sian W ar* BK I 368a 371b esp 370d 371b 384c 386c BK II 396b 402d-404a BK IV 461d-462a BK V 504c 508a BK VI 510c 516b 529b-c 530d 532b 533c
7 PLATO *Republic* K I 318c 319a
9 A ISTOTLE *Pol t cs* BK CH 7 [1 55^{b}38 39] 449c CH 8 [12?6^{b}20- 6] 450c BK VI CH 2 [1324^{b}2 132? 7] 528 529a CH 14 [1333 41 1334 11] 538b d
13 VIRGIL *Aeneid* BK [83 296] 110b 111a BK VI [81-97] 213a b [845-853] 233b 234a BK VIII [6 8 ,31] 275a 278b
14 PLUTARCH *Camill s* 108b d / *Pyrrhus* 319b d 320d 321a / *Caesar* 599b d
15 T TUS *H sto es* BK V 290 c
18 AUGUSTINE *City of God* K IV CH 14 5 196b 197a BK V CH 12 216d 218a
23 MACHIAV LLI *Pri ce* CH XX 31d 32d
25 MONTA GNE *Essays* 91c 440b 442d
26 SHAKESP ARE *Ist Henry VI* 1a 32a c / ?nd *Henry VI* 33 68d / *3 d Henry VI* 69a 104d / *H ry V* 532a 567a c esp ACT I 533a 537b
27 SHAK S ARE *H mlet* ACT IV C V 58d 59c / *Cymb line* CT III C I 463c 464c
30 BACON *N w Atlantis* 204d 205
35 LO KE *C l Go ernment* CH XV 65d 70c
36 SW *Gull er* PA T I 23a 26a
38 MONTE QUI U *Spirit of La s* BK I 3 K X 61b d 68d
38 ROU AU *In qu lity* 359b 364a b / *Pol t l Economy* 380a d / *Soc al C ntr ct* BK I 389d 390d BK II 403 404b BK IV 437d 438
39 S ITH *W alth of Natio* K IV 245 d
40 GI ON *Decl and F ll* 2 3c 84d 86 98d 99d 109b 110b 1 1 125d pass m 134 b 176b-c 264d 265a 398d 414a 418 446b c 540b 558a 571b d 572a
41 G ON *De l and Fall* 46d 212c d 255a 288a c p ss m esp 255a b 288a c 343b 347b d 451c p ss m 494b d 505 pa sim esp 496a 505b c 539d 540d
42 K NT *Science f Right* 413d 454a 455 esp 454b 454d-455a
43 ART CLES O CON DERATION II 5b
43 FEDERALIST NUM ER 4 6 35a-41c passim NUM ER 16 66c 67
43 M L *Repr e tat Go ernment* 42 b-42?b
46 HEG *Ph l ophy of H story* PAR- I 242d 243b PART II 275a b 276d 27?a 28?d 282d

(6 *The conception of war as a political means or instrument 6a Conquest emp re pol tical expansion as nds of u ar*)

PART I 297a d 299a c PART IV 339d 340a 357a 358b
48 MELVILLE *Moby Dick* 292a 295a esp 294a 29 a

6b Liberty justice honor peace a ends of war

OLD TEST MENT *Numbers* 31 1 10 / *Judg s* 3 7 14 16 19–20 / *II Samuel* 10—(D) *II King* 10 / *I Ch on cles* 19—(D) *I Paralipomenon* 19 / *II Chron cles* 3 1 22—(D) *II Paralipomenon* 32 1 2
APOC YPHA *Judith*—(D) OT *Jud th* / *I Macca be s* 1–9 14 9–37 –(D) OT *I Machab es* 1–9 14 29–37 / *II Maccabee* 6–10—(D) OT *II Machab es* 6 10
4 HO ER *Il ad* 3 179d passim esp BK II [155 3(8] 11c 13d BK V [390–465] 44a d
5 EURIP DES *S ppliants* 258a 269a c esp [286–3,8] 260d 261c [513 565] 262d 263t
5 ARISTOPHANES *Knights* [547–610] 476d-477d
6 HERODOTU *Hi tory* BK I 1a 2b BK III 99c 100a BK VII 214a 216d 218a b 239a c BK VIII 287c d
6 THUCYDIDE *P l ponnes an War* K I 349a 386d e p 378 380a BK I 402 404a BK I I 430b-431b 432a 434a BK IV 468a 469b BK V 504c 508a BK V II 564c d
9 ARISTOTLE *Ethics* BK X CH 7 [1177b5 25] 432a c / *Pol tics* BK VII CH 2 [1324b2 325 ,] 528 529a c I 14 [1333 30] CH 15 [1334b7] 538a 539b
13 VI IL *Aeneid* BK [845–853] 233b 234a
14 PLUTA CH *Flam nus* 302b d 313a c
15 TACITU *Ann ls* K II 34d 35c / *Histories* BK IV 290 c
18 AU UST NE *C ty of G d* K V CH I 216d 218 K XV C I 4 399c-400a K XIX CH 12 517c d
20 AQU NAS *Summa Th olog ca* PART II Q 9 A 2 RE 2 531a d Q 4 ANS an l R 1 3 578a 579b
23 MACH AVELL *Pr ce* H V 8a
24 R EL IS *Ga ga tua and Pa tag uel* BK I 35a 36c 8a 59d BK III 131b d 133b
25 MONTAIGNE *Es ays* 95a 97b
26 S AK EARE *Rich rd III* ACT V SC II [237 –] 146b / *King John* ACT V C II [1 39] 400a c / *2 d Henry IV* ACT IV SC I 487b-489d / *Henry V* ACT I 533a 537b
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Another discussion of the effect of war upon women and children *see* FAMILY 5c

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The consideration of treaties alliances and international law in relation to war and peace *see* GOVERNMENT 5a LAW 4g STATE 9e(2)

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ADDITIONAL READINGS

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I Works by authors represented in this collection
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Chapter 99 WEALTH

INTRODUCTION

IF the only questions about wealth concerned the means of getting and keeping it the causes of its increase and decrease the idea of wealth would be confined to economics The end of the medical art is health writes Aristotle in the *Ethics* and that of economics wealth But as the *Ethics* indicates the moralist and the statesman are also concerned with health and wealth—not simply as things to get and keep but in relation to all other goods and as constituents of the good life and the good society What is regarded as the end in economics may be only a means in ethics and politics in which case Aristotle suggests the latter sciences subordinate economics even as politics subordinates military strategy and military strategy the making and use of armaments

The discussion of riches in the tradition of the great books exhibits these two ways of considering wealth The Bible the poets historians and philosophers deal with wealth as a factor in the life of men and societies They scrutinize the desire for wealth or the love of money in relation to sin and virtue They raise questions of justice concerning the distribution of wealth the rights of property and fairness in exchange —in buying and selling borrowing and lending and in compensating the laborer They describe the effect of poverty and prosperity or opulence upon states and prescribe the attitude which individual men as well as societies should take toward wealth and poverty

Throughout it seems to be assumed that wealth is merely a means however important or indispensable Though wealth may also be viewed as an end when the problem is one of how to acquire produce or increase it the fact that when possessed it should be treated as a means leads the moralist to condemn not only the miser the hoarder or the man who devotes his whole life to making money but also those who elevate wealth into the sort of end which justifies any means that can advance its pursuit

The other approach is that of the economist Two of the great books—Smith s *Wealth of Nations* and Marx s *Capital*—deal not with wealth as a means but with the means to wealth A third though by title *A Discourse on Political Economy* is concerned with the principles of government and with wealth only insofar as in Rousseau s conception government includes the administration of property as well as the protection of persons Provision for the public wants he writes is the third essential duty of government

Rousseau explains the title of his treatise by reference to the etymology of the word economy which meant originally only the wise and legitimate government of the household for the common good of the whole family It is in this sense that Aristotle employs the word and that a work sometimes attributed to him bears it as the title The meaning of the term Rousseau goes on was then extended to the government of that great family the State To distinguish these two senses of the word the latter is called *general* or *political* economy the former domestic or particular economy

Adam Smith uses the term more narrowly Not only does he limit his inquiry to the nature and causes of wealth but by specifying the wealth of nations he restricts himself to political economy which he says has two distinct objects first to provide a plentiful revenue or subsistence for the people or more properly to enable them to provide such a revenue or subsistence for themselves and secondly to supply the state or commonwealth with a revenue sufficient for the public services In saying that the political economist aims to enrich

both the people and the sovereign and that the great obje t of the political economy of every country is to increase the riches and power of that country Smith takes wealth as an end (though it may also be a means so far as power depends upon riches) and tries to formulate the natural laws of wealth making

Nowhere does he define the quantity of wealth which should satisfy a nation The natural resources of a country the size and industry of its population and various unfavorable contingencies may set certain bounds to the maximization of wealth Within these bounds the country which adopts and follows a sound system of political economy—one which accords with the right conception of wealth and its causes—can (and deserves to) become as wealthy as possible

Yet Smith in treating wealth as an end and its increase without limit as a good does not make economics absolutely autonomous He re ards political economy as a part of politics—a branch of the science of a statesman or legislator —and to that extent implies that other considerations than wealth may control the policies of a nation in its regulation of agriculture industry domestic commerce and foreign trade

Furthermore the larger moral questions which accompany Smith s economic speculations in his *Lectures on Jurisprudence* and his earlier treatise *Of the Moral Sentiments* are not entirely absent from the *Wealth of Nations* But to the extent that he writes purely as an economist concerned with securing cheapness or plenty or what for him is the same wealth and abundance he adheres to cons derations of expediency and only infrequently permits himself *ob ter d cta* on justice or questions of right and wrong

Karl Marx also writes as an economist He details the factors which govern the production and d stribution of wealth as these manifest themselves in the great historic systems of production—the slave economy the feudal economy and the bourgeois or capitalist economy So far he is a scientist and even more than Adam Smith an historian who describes how wealth is acquired and how it multiplies by reproducing itself But Marx is much less content than Smith to stop there Smith tries to describe the economic process scientifically in order to prescribe the means a nation should use to become increasingly prosperous but Marx undertakes to describe it in order to criticize the way in which some men get richer than they need be while others become poorer than they should be

His critical purpose makes inevitable the expression of moral judgments concerning such inequities and by implication they are everywhere present For example a descriptive phrase like surplus value connotes unearned increment an apparently neutral economic term like profit is given the invidious moral significance traditionally attached to usury Nor does Marx rest with criticism He has an economic program to propose a program he reveals more clearly in the *Communist Manifesto* than in *Capital* The aim is not primarily to increase the production of wealth but to remedy its inequitable distribution under all past economic systems This program looks forward to the final revolution which will bring the necessary historic motion of progress to its culmination when socialism replaces capitalism

S ITH AND MARX IT APPEARS are not economists in the same sense But it may be supposed that in spite of their different purposes they would as scientists agree in their description of economic phenomena To some extent they do yet the difference in their point of view and aim leads to a quarrel about facts or at least about their interpretation

Class cal economists in the tradition of Adam Smith dispute the consequences which Marx draws from the labor theory of value especially with regard to the origin of profit from the surplus product of unpaid labor time Profit seems to them as much a part of the natural price of commodities a the wages paid to labor and the rent paid to the landlord

In exchanging the complete manufacture either for money for labor or for other goods over and above what may be sufficient to pay the price of the materials and the wages of the workmen something writes Smith must be given for the profits of the undertaker of the work who hazards his stock in th s adventure The value which the wo kmen add to the materials therefore r solves itself in this case into

two parts of which the one pays their wages the other the profits of their employer upon the whole stock of materials and wages which he advanced He could have no interest to em ploy them unless he expected from the sale of their work something more than what was suf ficient to replace his stock to him and he could have no interest to employ a great stock rather than a small one unless his profits were to bear some proportion to the extent of his stock

It is precisely on this point of profit as a re turn for risking one s capital stock that Marx charges Smith and after him Ricardo and J S Mill with being apologists for the capital istic system He quotes Mill s statement that the cause of profit is that labor produces more than is required for its support The fact that Mill does not question the validity of this sur plus value which accrues as profit to the *en trepreneur* the fact that Ricardo treats surplus value according to Marx as a thing inherent in the capitalist mode of production which mode in his eyes is the natural form of social production is explicable in Marx s view only if we recognize that their economic theories mix special pleading with science These bour geois economists instinctively saw and rightly so he says that it is very dangerous to stir too deeply the burning question of the origin of surplus value

Though he distinguishes between its classical and vulgar forms political economy for Marx is a bourgeois science which first sprang into being during the period of manufacture Po litical economy has generally been content to take just as they were the terms of commercial and industrial life Engels remarks in a prefa tory note to *Capital* and so it never went beyond the received notions of profit and rent never examined this unpaid part of the product (called by Marx surplus product) in its integ rity as a whole and therefore never arrived at a clear comprehension either of its origin and nature or of the laws that regulate the subse quent distribution of its value

Marx s work is in his own conception of it at one and the same time a criticism of the capitalist economy and of the science of eco nomics which accepts and defends that eco nomic system In his own preface to *Capital* Marx tells the reader that the volume which I now submit to the public forms the continu ation of an earlier work—*A Contribution to the Critique of Political Economy* Within the sphere of political economy as defined by the problem of augmenting a nation s wealth the author of the *Wealth of Nations* similarly finds a critique of prevalent economic fallacies—those of the physiocrats and the mercantilists—inseparable from the constructive statement of his own theory

Economists engage in controversy over tech nical points in the analysis of production ex change and distribution or in the development of theories of value and price money and capi tal property and poverty Such controversy tends to become complicated both by the larger questions in which the economic issues are im bedded and also by the different points of de parture and the different objectives of the economists What at first may look like a simple issue of fact often fails on closer examination to be capable of resolution by scientific inquiry or simply by an accurate description of the phenomena

Even when all relevant matters of fact are determined conflicting interpretations of their significance remain Behind these lie divergent presuppositions often unexpressed Those who start with different conceptions of the problem and from different principles assumed rather than argued tend to reach conclusions which may appear to be opposed but which do not really exclude one another—at least not totally Each from its own point of view may be true and from that point of view the other is not so much false as irrelevant

Smith may be right for example when he says that the consideration of his own private profit is the sole motive which determines the owner of any capital to employ it either in a n culture in manufactures or in some particular branch of the wholesale or retail trade The different quantities of productive labor which it may put into motion and the different values which it may add to the annual produce of the land and labor of the society according as it is employed in one or other of those different ways never enter his thoughts. Smith may be right not only as to the fact as erted but also with regard to its implication for the increase

of the nation s wealth that the wealth of a society increases as owners of capital act from self interest in a system of free enterprise which permits the possibility of profits to indemnify them against the risk of losses and to reward them for the thrift whereby they accumulated capital to invest productively

But Marx may also be right when he says that the system of free enterprise and capital istic production could not have started simply through the thrift of individuals but required a primitive accumulation of capital The accumulation of capital he says presupposes surplus value surplus value presupposes capi talistic production capitalistic production pre supposes the existence of considerable masses of capital and labor power in the hands of pro ducers of commodities The whole movement therefore seems to turn in a vicious circle out of which we can only get by supposing a primi tive accumulation (previous accumulation of Adam Smith) preceding capitalistic accumu lat on a primitive accumulation which is nothing else than the historical process of divorcing the producer from the means of pro duction He may be right furthermore when he goes on to say that the economic structure of capitalistic society has grown out of the eco nomic structure of feudal society The his torical movement which changes the producers into wage-workers appears on the one hand as their emancipation from serfdom and from the fetters of the guilds but on the other hand these new freedmen became sellers of themselves only after they had been robbed of all their own means of production and of all the guarantees of existence afforded by the old feudal arrangements

It may be true that a capitalist who privately owns means of production would not invest them *without the possibility of gaining a profit* It may be true as Smith would insist that he would not be justified in doing so This how ever does not invalidate—as it is not invali dated by—Marx theory of the orig nal ex propriation which in his opinion initiated capitalistic enterprise nor does it conflict with Marx s insistence that the capitali t must ex ploit labor in order to make profits since he can derive them only from the surplus value cre ated by wage-laborers who produce more than is returned to them for their own needs or sub sistence

THE FOREGOING POINT AND counter point in economic theory must serve as one example of the way in which Smith and Marx pass each other rather than meet on many of the basic economic issues It would be impossible within the compass of this Introduction to chart the intricate relationship of their thought includ ing their agreements and clear oppositions as well as the matters on which they simply di verge because they are discussing the same problem from different viewpoints The reader can discover for himself in greater detail the pattern of conversation between these two great economists by studying the passages from their works which are cited in the References

As a glance at the Outline of Topics will show many of the headings represent tech ni al problems or issues in economic theory as that is narrowly conceived in modern times Some however are more general They state themes which place the discussion of wealth in the larger context of moral and political ques tions and which throughout the whole tra dition engage poets historians and philoso phers—not merely the economists of the eight eenth and nineteenth centuries

To some extent the more general themes are treated in other chapters such as LABOR JUS TICE OLIGARCHY VIRTUE and HAPPINESS FAMILY and STATE Here we shall consider them for their bearing on the nature and kinds the sources and uses, of wealth and also its good ness and evil

THE ANCIENTS CONCEIVE WEALTH as consisting in the variety of external goods which sustain life —food clothing and shelter But wealth may include *more than the bare necessities* When So rates in the *Republ c* outlines a simple econ omy which aims to satisfy only basic needs Glaucon tells him that he is providing for a city of pigs More is required he says for the ordinary conveniences of life People who are to be comfortable are accustomed to lie on sofas and dine off tables and they should have sauces and sweets in the modern style Socrates replies by projecting a luxur ous State — a State at fever heat —which goes beyond the

necessaries such as houses and clothes and shoes The arts of the painter and the embroiderer he says will have to be set in motion and gold and ivory and all sorts of materials procured and the city will have to fill and swell with a multitude of callings which are not required by any natural want

This distinction between necessities and luxuries which has many implications for ethics and economics as well as for politics does not draw the line between natural and artificial wealth Nor is natural wealth identified exclusively with natural resources in their pure state unconverted by labor for use or consumption Wealth is generally thought to comprise all consumable goods whether necessities or luxuries whether products of hunting agriculture or manufacture and all the means of producing them Only money is excluded Only money is declared to be either not wealth at all or artificial wealth

Yet the confusion of money with wealth seems to be prevalent at all times as repeated attempts to correct the fallacy indicate The use of money originates according to Aristotle with retail trade which is not a natural part of the art of getting wealth for he goes on had it been so men would have ceased to exchange when they had enough What Aristotle calls retail trade replaces the barter of necessary articles Made possible by the use of coin retail trade he says comes to be thought of as the art which produces riches and wealth

Indeed Aristotle continues riches is assumed by many to be only a quantity of coin But he agrees with those who maintain to the contrary that coined money is a mere sham a thing not natural but conventional only because it is not useful as a means to any of the necessities of life and he who is rich in coin may often be in want of necessary food But how can that be wealth of which a man may have a great abundance and yet perish with hunger like Midas in the fable whose insatiable prayer turned everything that was set before him into gold?

To say that money in itself cannot satisfy any natural need does not imply that it serves no economic purpose Plato and Aristotle Hobbes Locke and Kant as well as Smith and Marx understand the utility of money as a medium of exchange indispensable for the circulation of commodities —to use Marx s phrase—beyond the stage of barter Money is not only a medium of exchange according to Plato it reduces the inequalities and incommensurabilities of goods to equality and common measure and Aristotle seems to anticipate Marx s conception of money as the universal form in which all economic values can be expressed when he defines wealth to mean all things whose value is measured by money

The economic utility of money in exchange and as a measure of value or even the fact that gold and silver coin may have some intrinsic value because of the labor involved in minin and minting the metals does not alter the distinction between natural and artificial wealth. Natural wealth Aquinas explains is that which serves man as a remedy for his natural wants such as food drink clothing cars dwellings and such like while artificial wealth such as money is that which is not a direct help to nature but is invented by man for the convenience of exchange and as a measure of all things saleable

The same point is restated by Locke in the seventeenth century but it is still necessary for Smith a century later to argue against the mercantilist theory of national prosperity on the ground that it confuses wealth with money It would be too ridiculous to go about seriously to prove Smith writes that wealth does not consist in money or in gold or silver but what money purchases and is valuable only for purchasing Goods can serve many other purposes besides purchasing money but money can serve no other purpose besides purchasin goods Money therefore necessarily runs after goods but goods do not always or necessarily run after money The man who buys does not always mean to sell again but frequently to use or consume whereas he who sells always means to buy again

Nevertheless that wealth consists in money or in gold and silver is a popular notion which naturally arises from the double function of money as the instrument of commerce and as the measure of value The notion is so familiar that Smith observes even they who are convinced of its absurdity are very apt to forget their own princ ples and in the course of their

reasonings to take it for granted as a certain and undeniable truth Some of the best English writers on commerce set out with observing that the wealth of a country consists not in its gold and silver only but in its lands houses and consumable goods of all different kinds In the course of their reasonings however the land houses and consumable goods seem to slip out of their memory and the strain of their argument frequently supposes that all wealth consists in gold and silver and to multiply these metals is the great object of national industry and commerce

The two principles of the mercantilist policy are according to Smith that wealth consisted in gold and silver and that those metals could be brought into a country which had no mines *only by the balance of trade* or by exporting to a greater value than it imported A favorable balance of trade thus necessarily became the sole object of the mercantilists and Smith adds its two great engines for enriching the country therefore were restraints upon importation and encouragements to exportation

Since in his opinion the wealth of a nation consists in the whole annual produce of its land and labor Smith opposes all such restraints and with them the protection of monopolies He advocates free trade and the free competition of producers within a country as well as between domestic and foreign producers on the ground that consumption is the sole end and purpose of all production and the interest of the producer ought to be attended to only so far as it may be necessary for promoting that of the consumer But in the mercantile system Smith claims the interest of the consumer is almost constantly sacrificed to that of the producer A *laissez faire* economy he thinks not only reverses this situation but also by preferring more consumable commodities to more gold and silver tends to increase the real not the artificial wealth of a nation

Marx also criticizes the mercantilist error but in terms of his theory that since the production of surplus value is the chief end and aim of capitalist production the greatness of a man s or a nation s wealth should be measured not by the absolute quantity produced but by the relative magnitude of the surplus value

Surplus value cannot be produced by exchange Against the mercantilists who derived the excess of the price over the cost of production of the product from the act of exchange from the product being sold above its value Marx quotes Mill s statement that profit arises not from the incident of exchange but from the productive power of labor and the general profit of the country is always what the productive power of labor makes it whether any exchange takes place or not

But this is not the whole picture according to Marx Although it is impossible for capital or surplus value to be produced by circulation or the exchange of commodities he also *thinks it is impossible that outside the sphere* of circulation a producer of commodities can without coming into contact with other commodity owners expand value and consequently convert money or commodities into capital The two sides of the picture are brought together in Marx s view by the treatment of labor itself as a commodity and the buying and selling of labor power in the open market

THE DISTINCTION BETWEEN REAL wealth and money and the distinction between necessities and luxuries have more than economic significance They are basic to the moralist s strictures concerning the desire for wealth its place in the order of goods and the way it can be put to good use

It is not only St Paul *who says that the love* of money is the root of all evil It is not only Christian theologians like Augustine and Aquinas who explain how lust of the eyes or covetousness is a capital sin and as such the principle of many other transgressions As Marx points out the Greeks also denounced money as subversive of the economical and moral order of things In the passage in Sophocles *Antigone* which he quotes Creon declares Nothing so evil as money ever grew to be current among men This lays cities low this drives men from their homes this trains and warps honest souls till they set themselves to works of shame this still teaches folk to practice villainies and to know every godless deed

Plato condemns the oligarchical state by

comparing it to the miser and money maker among men Such a State he says aims to become as rich as possible a desire which is insatiable In the *Laws* the Athenian Stranger explains why the reasonable statesman should not aim to make the state for the true interests of which he is advising as great and as rich as possible if he also desires to have the city the best and happiest possible for though each may be possible alone they are not possible together It is impossible he holds to be good in a high degree and rich in a high degree at the same time

What Plato says of the oligarch Marx says of the capitalist He shares with the miser the passion for wealth as wealth But Marx adds that which in the miser is a mere idiosyncrasy is in the capitalist the effect of the social mechanism of which he is but one of the wheels Involved as he is by the system in the restless never-ending process of profit making the individual capitalist like the miser exhibits this boundless greed after riches this passionate chase after exchange value

The root of the evil in the love of money—of gold yellow glittering precious gold which Shakespeare calls the common whore of mankind —is the boundlessness of the lust The hoarding of anything springs from an insatiable desire but because money can be converted into every sort of commodity it is according to Marx the ideal object of hoarding The antagonism between the quantitative limits of money and its qualitative boundlessness he writes continually acts as a spur to the hoarder in his Sisyphus like labor of accumulating

In the light of such observations Marx cites *with approval Aristotle s distinction between* economic and chrematistic or what Aristotle differentiates as the two arts of wealth getting Considering economics as the management of a household Aristotle says that the art of acquisition which is a natural part of it must either find ready to hand or itself provide such things necessary to life and useful for the community of the family or state as can be stored They are the elements of true riches for the amount of property which is needed for a good life is not unlimited But there is another variety of the art of acquisition which is commonly and rightly called an art of wealth getting and has in fact suggested that riches and property have no limit

The two arts tend to become confused in men s minds Some persons are led to believe Aristotle observes that getting wealth is the object of household management and the whole idea of their lives is that they ou ht either to increase their money without limit or at any rate not to lose it The origin of this disposition in men is that they are intent upon living only and not upon living well and as their desires are unlimited they also desire that the means of gratifying them should be without limit Even those who do aim at a good life seek the means of obtaining bodily pleasures and since the enjoyment of these appears to depend upon property they are absorbed in getting wealth and thus there arises the second kind of wealth getting

Plato like Aristotle while admitting the service of retail trade in effecting the exchange of commodities condemns the tendency of its practitioners to make gains without limit In the *Laws* furthermore he prohibits interest on loans and in the *Republic* he describes this form of money making as a process in which men of business insert their sting—that is their money—into someone else who is not on his guard against them and recover the parent sum many times over multiplied into a family of children This biological metaphor for making money out of money appears also in Aristotle The term interest he says means the birth of money from money Of *all forms of money making* this breedin of money is in his opinion the most unnatural Usury which makes a gain out of money it*self* Aristotle writes violates *the natural* object of money— intended to be used in exchange but not to increase at interest

INTEREST AND USURY *are not* distinguished in the Old Testament Take thou no usury of him or increase is the command in Leviticus. But this rule does not apply to the stranger Unto a stranger thou mayst lend upon usury Deuteronomy says but unto thy brother thou shalt not lend upon usury

A theologian like Aquinas following both Scripture and Aristotle condemns for Chris

tians all interest as usury and Luther also ap peals to pagan precept as well as to Scriptural warrant The heathen were able by the light of reason to conclude that a usurer is a double dyed thief and murderer Luther says in a pas sa e which Marx quotes under the comment that the usurer is that old fashioned but ever renewed specimen of the capitalist Castigating his fellow-Christians for holding usurers in such honor that we fairly worship them for the sake of their money Luther declares that who- ever eats up robs and steals the nourishment of another that man commits as great a murder (so far as in him lies) as he who starves a man or utterly undoes him Such does a usurer

It seems to be a later consequence of the Protestant reformation as Weber and Tawney point out that the exaction of interest for the loan of money or goods is defended and only exorbitant rates of interest are denounced as usurious The signs of the change may be seen in Pascal s diatribe against the specious casu istry which tries to exempt some forms of in terest taking from the charge of usury and also in the fact that Montesquieu attributes to the schoolmen who adopted from Aristotle a great many notions on lending upon interest the mistake of condemning it absolutely and in all cases In his own opinion to lend money without *interest is certainly an action laudable* and extremely good but is is obvious that it is only a counsel of religion and not a civil law

Montesquieu thinks a price for the use of money is necessary for the carrying on of trade If a fair rate of interest is not allowed nobody will lend money or rather Montesquieu says because the affairs of society will ever make it necessary money lending will inevitably take the form of usury Usury increases in Moham *medan countries he points out in propor* tion to the severity of the prohibition The lender indemnifies himself for the dan er he undergoes of suffering the penalty

Smith agrees that prohibition instead of preventing has been found from experience to increase the evil of usury A fair rate of in terest is justified he thinks because as some thing can everywhere be made by the use of money something ought every where to be paid for the use of it In countries where interest is permitted the law in order to prevent the extortion of usury generally fixes the highest rate which can be taken without incurring a penalty This rate ought always to be somewhat above the lowest market price or the price which is commonly paid for the use of money by those who can give the most undoubted se- curity Smith offers the British practice as a good *example Where money is lent to gov* ernment at three per cent and to private people upon good security at four and four and a half the present legal rate five per cent is perhaps as proper as any

Interest and profit while not the same in Smith s view are closely connected As the revenue from land is rent from labor wages and that derived from stock by the person who manages or employs it is called profit interest is the compensation which the bor rower pays to the lender for the profit which he has an opportunity of making by the use of the money Part of that profit naturally belongs to the borrower who runs the risk and takes the trouble of employing it and part to the lender who affords him an opportunity of making this profit Conceiving interest as a derivative rev enue Smith holds it to be a maxim that wher ever a great deal can be made by the use of money a great deal will be commonly given *for the use of it so that we may expect to* find the usual market rate of interest to vary with the ordinary profits of stock

THE THEORY WHICH PLACES wealth lowest in the order of goods determines its contribution to human happiness accordingly and leads to a disapproval of luxuries on the part of both the individual and society

Riches are for the sake of the body as the body is for the sake of the soul The latter are good writes *Plato* and wealth is intended by nature to be for the sake of them and is therefore inferior to them both and third in the order of excellence Aristotle similarly order wealth or external goods to health and other goods of the body as these in turn are subordinate to the virtues or goods of the soul and Hobbes in somewhat different terms holds that of all good those that are dearest to a man are his own life and limbs and in the next degree (in most men) those that concern con

jugal affection and after them riches and means of living

While Aristotle admits that happiness requires some external prosperity he always adds that only a moderate amount of external goods is needed Happiness whether consisting in pleasure or virtue or both he writes is more often found with those who are most highly cultivated in their mind and in their character and have only a moderate share of external goods than among those who possess external goods to a useless extent but are deficient in higher qualities Aristotle praises Solon for telling Croesus one of the world s wealthiest men that happiness requires more than riches The conversation is narrated by Herodotus

What stranger of Athens Herodotus reports Croesus as saying is my happiness then valued so little by you that you do not even put me on a level with private men? To which Solon replies Croesus I see that you are wonderfully rich and the lord of many nations but he who possesses a great store of riches is no nearer happiness than he who has what suffices for his daily needs unless luck attends him and so he continue in the enjoyment of all his good things to the end of his life Aristotle adds the further observation that one can with but moderate possessions do what one ought and that a good life requires a supply of external goods in a less degree when men are in a good state and in a greater degree when they are in a lower state

Aquinas agrees with Aristotle so far as the happiness of the active life is concerned but he holds that wealth does not conduce to the happiness of the contemplative life rather is it an obstacle thereto With regard to achieving the happiness of heaven in the life hereafter Aquinas not only thinks wealth an obstacle but he also explains why the religious orders take the vows of voluntary poverty Man is directed to future happiness by charity he writes and in the attainment of the perfection of charity the first foundation is voluntary poverty whereby a man lives without property of his own

The opinion that wealth is an obstacle or that it should be sought in moderation does not seem to be universally shared As Herodotus Plato and Aristotle report the prevalence in the ancient world of the notion that "external goods are the cause of happiness so Melville reflects that in modern society the urbane activity with which a man receives money is really marvellous considering that we so earnestly believe money to be the root of all earthly ills and that on no account can a monied man enter heaven Ah! how cheerfully we consign ourselves to perdition! Marx quotes a still more extravagant claim In a letter from Jamaica in 1503 Christopher Columbus exclaims Gold is a wonderful thing! Whoever possesses it is lord of all he wants By means of gold one can even get souls into Paradise

Against Rousseau s attack upon opulence as the cause of civilization with all its miseries Dr Johnson rises in the defense of luxuries and the advantages of wealth Rousseau s treatise on the inequality of mankind Boswell writes, was at this time a fashionable topick It gave rise to an observation by Mr Dempster that the advantages of fortune and rank were nothing to a wise man To this Dr Johnson replies If a man were a savage living in the woods by himself this might be true but in civilized society external advantages make us more respected Sir you may make the experiment Go into the street and give one man a lecture on morality and another a shillin and see which will respect you the most

And Sir he continues if six hundred pounds a year procure a man more consequence and of course more happiness than six pounds the same proportion will hold as to six thousand and so on as far as opulence can be carried Perhaps he who has a large fortune may not be so happy as he who has a small one but that must proceed from other causes than from his having the large fortune for *ceteris paribus* he who is rich in a civilized society must be happier than he who is poor

On one occasion Dr Johnson seems to share Solon s view When Boswell suggests that the proprietor of a great estate must be happy he exclaims Nay Sir all this excludes but one evil—poverty But for the most part his opinion is that it is in refinement and elegance that the civilized man differs from the savage and that it is right for every society to be as luxurious as it can be

Many things which are false are transmitted from book to book he says to General Ogle thorpe and gain credit in the world One of these is the cry against the evil of luxury Now the truth is that luxury produces much good You will hear it said very gravely Why was not the half guinea thus spent in luxury given to the poor? To how many might it have af forded a good meal Alas! has it not gone to the *ind istrious* poor whom it is better to support than the *idle* poor? You are much surer that you ar doing good when you *pay* money to tho e who work as the recompense of their labor than when you *gıve* money in charity

And as to the rout that is made about people who are ruined by extravagance it is no matter to the nation that some individuals suffer When so much general productive exer tion is the consequence of luxury the nation does not care though there are debtors in gaol

Dr Johnson s pronouncements may silence Mr Dempster and General Oglethorpe but not Smith or Marx To Smith spendthrift ex travagance squanders wealth which might have been capitalized for productive purposes to Marx the multiplication of luxury products d verts labor power that is socially necessary for p oducing the means of subsistence into what Veblen later calls forms of conspicuous waste Not only in Marx s view can the cap italisti system be charged with indifference as to whether its profits are made out of the pro duction of luxuries or necessities but the workers on starvation wages e gaged in the luxury trades constitute a signal indictment of the inequitable distribution of wealth

As THE NEEDS OF THE individual are thought to set a natural limit to his acquisition of wealth or at least to provide him with a rational stand ard for stopping short of wanton luxuries when he seeks the decencies or amenities of life so the needs of soc ety as a whole are thought to establish a criterion of justice in the distribution of wealth

God gave the world to men in common says Locke and the measure of property na ture ha well set by the extent of man s labor and the convenience of l fe No man s labor could subdue or appropriate all nor could his enjoyment consume more than a small part so that it was impossible for any man this way to intrench upon the right of another who would still have room for as good and as large a pos session (after the other had taken out his) as before it was appropriated Which measure did confine every man s possession to a very moder ate proportion and such as he might appropri ate to himself without injury to anybody in the first age of the world

This rule of property— that every man should have as much as he could make use of without prejudice or injury to others—worked well in the beginning when as Locke puts it all the world was America It would still hold in the world without straitening anybody Locke thinks since there is land enough in the world to suffice double the inhabitants had not the invention of money introduced (by consent) larger possessions and a right to them for gold and silver being relatively imperish able men can hoard excesses of them without appearing to waste them as they would if they amassed perishable commodities which they could not consume or use

It is not money but property itself which Rousseau claims to be the origin of inequality among men and of the inequitable distribution of wealth The first man who having enclosed a piece of ground bethought himself of saying *This is mine* and found people simple enough to believe him was the real founder of civil soci ety Once established as a right property tends to expand The larger proprietors avoid the question Do you not know that numbers of your fellow creatures are starving for want of what you have too much of? Instead ac cording to Rousseau they conceive the pro foundest plan that ever entered the mind of man to protect their possessions against inva sion or plunder They institute civil govern ment ostensibly for the security of all but really to secure for themselves their property and power

Such v as or may well have been Rous seau writes the origin of society and law which bound new fetters on the poor and gave new po vers to the rich which irretrievably destroyed natural liberty eternally fixed the law of property and inequality converted clev er usurpation into unalterable right and for the advantage of a few ambitious individuals

subjected all mankind to perpetual labor slavery and wretchedness Adam Smith seems to agree Where there is no property he says or at least none that exceeds the value of two or three days labor civil government is not so necessary Civil government so far as it is instituted for the security of property is in reality for the defense of the rich against the poor or of those who have some property against those who have none at all

But unlike Smith Rousseau has an alternative to propose Since it is plainly contrary to the law of nature that the privileged few should gorge themselves with superfluities while the starving multitude are in want of the bare necessities of life he thinks it is one of the most important functions of government to prevent extreme inequalities of fortunes not by taking away wealth from its possessors but by depriving all men of means to accumulate it not by building asylums for the poor but by securing the citizens from becoming poor

THIS STATES AN END but not the means for achieving it The problem of poverty is not so easily solved if it can be solved at all once the right of property is admitted Rousseau for example no less than Locke and others before him affirms this right which for Kant and Hegel later is almost the whole substance of private or abstract right The right of property says Rousseau is the most sacred of all the rights of citizenship and even more important in some respects than liberty itself Yet it is difficult he admits to secure the property of individuals on one side without attacking it on another and it is impossible that all the regulations which govern the order of succession wills contracts etc should not lay individuals under some constraint as to the disposition of their goods and should not consequently restrict the right of property

To Hegel poverty seems to be an inevitable consequence of property as war is an inevitable consequence of sovereignty and in neither case can the cause be abolished When the masses begin to decline into poverty as they must they can be supported from public funds and private charities thus receiving subsistence directly not by means of their work or as an alternative they might be given subsistence indirectly through being given work But Hegel adds in this event the volume of production would be increased but the evil consists precisely in an excess of production and in the lack of a proportionate number of consumers who are themselves also producers and thus it is simply intensified by both of the methods by which it is sought to alleviate it Hence Hegel concludes it becomes apparent that despite an excess of wealth civil society is not rich enough to check excessive poverty and the creation of a penurious rabble This inner dialectic of civil society thus drives it—or at any rate a specific civil society—to push beyond its own limits and seek markets and its necessary means of subsistence in other lands which are either deficient in the goods it has over produced or else generally backward in industry

Imperialism according to Marx will not long work as a cure for what Tawney later calls the sickness of an acquisitive society —the inner frustration which Marx sees manifested in recurring economic crises and depressions of greater and greater magnitude Nor does he propose the abolition of all private property as the remedy for poverty when he calls for the expropriation of the expropriators On the contrary only the possession by each individual of an adequate supply of consumer s goods can abolish poverty Differentiating between individual and capitalist property accordin as its owners are or are not laborers and according as it consists in consumable goods or the means of production Marx would transfer the latter from private property to public ownership

The socialist economy he outlines also includes abolition of property in land and application of all rents of land to public purposes a heavy progressive or graduated income tax abolition of all right of inheritance It includes centralization of credit in the hands of the state by means of a national bank with State capital and an exclusive monopoly and also centralization of the means of communication and transport Last but not least it includes equal liability of all to labor

More radical than Marx s socialism is the communism Plato proposes in the *Republic* Plato s aim is not to solve the problem of poverty or economic injustice By abolishing

for his guardian class *all* private property he hopes that his guardians through sharing com mon possessions (including wives and children) will have no cause for rivalry dissension or personal ambition Common possessions should mould them into a fraternity and free them from private interests to work for the common good In this matter of property the condition of Plato s imagined guardians was not so dif ferent from that of Jesus disciples as recounted in the Book of Acts or of the monastic orders whose vows include that of voluntary poverty

Aristotle s criticisms of the arrangements for the guardian class in the *Republic* are largely directed against the community of women and children and the elimination of private prop erty Property he says should be in a cer tain sense common but as a general rule private for when everyone has a distinct interest men will not complain of one another and they will make more progress because everyone will be attending to his own business He thinks it is clearly better that property should be private but the use of it common in the sense that its use have the common welfare in mind

Not only does Aristotle defend private prop erty on many counts but he objects to schemes for equalizing it such as Plato sets forth in the *Laws* For one thing the legislator ought not only to aim at the equalization of properties but at moderation in their amount Yet if the legislator prescribe this moderate amount equally to all he will be no nearer the mark for it is not the possessions but the desires of man kind which need to be equalized and this is impossible unless a sufficient education is pro vided by the laws

Whether or not communism is desirable there are those who think it is impossible not so much on the level of the economic as on the level of the moral revolution for which Aris totle looks to education The skeptic thinks human nature cannot be so transformed It may be only in the twentieth century that the world is divided into two camps on this subject but the issue is as old as the western tradition At its beginning Aristophanes expresses the skeptical position in a form that is still current His *Ecclesiazusae* simply laughs at the idea that inequalities of property can ever be done away with—by law or by education

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in 4 HOMER *Iliad* BK II [265 283] 12d the number 4 is the number of the volume in the set the number 12d indicates that the passage is in section d of page 1

PAGE SECTIONS When the text is printed in one column the letters a and b refer to the upper and lower halves of the page For example in 53 JAMES *Psychology* 116a 119b the passage begins in the upper half of page 116 and ends in the lower half of page 119 When the text is printed in two columns the letters a and b refer to the upper and lower halves of the left hand side of the page the letters c and d to the upper and lower halves of the right hand side of the page For example in 7 PLATO *Symposium* 163b 164c the passage begins in the lower half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One or more of the main divisions of a work (such as PART BK CH SECT) are sometimes included in the reference line numbers in brackets are given in certain cases *e g* *Iliad* BK II [265 283] 12d

BIBLE REFERENCES The references are to book chapter and verse When the King James and Douay versions differ in title of books or in the numbering of chapters or verses the King James version is cited first and the Douay indicated by a (*D*) follows *e g* OLD TESTAMENT *Nehemiah* 7 45—(*D*) *II Esdras* 7 46

SYMBOLS The abbreviation esp calls the reader s attention to one or more especially relevant parts of a whole reference passim signifies that the topic is discussed intermittently rather than continuously in the work or passage cited

For additional information concerning the style of the references see the Explanation of Reference Style for general guidance in the use of *The Great Ideas* consult the Preface

1 The elements of wealth the distinction between natural and artificial wealth the distinction between the instruments of production and consumable goods

7 PLATO *Republic* BK II 316c 318d

9 ARISTOTLE *Politics* BK I CH 8 10 449d 452d / *Rhetoric* BK CH 5 [1361 14 4] 601 d

19 AQUINAS *Summa Theologica* ART I II Q 2 A 1 AN and RE 3 615d 616

23 HOBBES *Leviathan* ART I 124b c

35 LOCKE *Civil Government* c v 30b 36a passim esp ECT 4 50 33d 35d

38 MONTESQUIEU *Spirit of Laws* BK XVI 1 128c BK XX 152a b

38 ROUSSEAU *Inequality* 348b d 355a

39 SMITH *Wealth of Nations* INTRO 1a c BK I 8d 10b 104b 105a 106b-c BK II 121c 124c 147c BK II 163a d K IV 182a 300d p 182b 183 186b 187c 189b 190c 191d 192a 194a 288c 296a

50 MARX *Capital* 13a c 88b d 150b-c 253b 255a 279c 286a esp 279d 280 282c d 286a 291a b

9 ARISTOTLE *Politics* BK I CH 3 13 446d-455a c passim esp CH 3 [1253[b]12 14] 447a CH 4 447b c CH 7 [1255[b]3 -40] 449c CH 8 11 449d 453d BK II C 5 [1 64[b]1 7] 459d BK III CH 4 [1277[b]2 25] 474d

14 PLUTARCH *Solon* 72b c / *Pericles* 130b-d / *Pelopidas* 233a b / *Marcus Cato* 278b 279c 286b 287d / *Aristides Marcus Cato* 291b 292b / *Crassus* 439a c / *Crassus Nicias* 455b d / *Agis* 650d 651b

15 TACITUS *Annals* K II 32b d

18 AUGUSTINE *City of God* BK XIX CH 14 520a d

20 AQUINAS *Summa Theologica* PART I II Q 105 A 4 ANS and REP 1 4 318b 321a

25 MONTAIGNE *Essays* 122b 124 183c 191c passim 458c 462c 472a-473a

29 CERVANTES *Don Quixote* ART I 148b 149a

35 LOCKE *Civil Government* CH VI SECT 72 73 40d-41a CH VII SECT 79-80 42c-43a CH X SECT 18 183 67c 68b SECT 19 192 69b d

36 STERNE *Tristram Shandy* 376b-379

38 MONTESQUIEU *Spirit of Laws* BK VII 50a b K XVII 129d 132b BK XVIII 190a b BK XXVI 216a b BK XXVI 225a 230d

38 ROUSSEAU *Inequality* 350a b / *Political Economy* 367a 368c

39 SMITH *Wealth of Nations* INTRO 1b BK I 50a K III 165b 167a BK V 309d 311c passim 383d 384d

2 The acquisition and management of wealth in the domestic and tribal community

7 PLATO *Republic* BK V 360c 365d / *Laws* BK III 664a 666a K I 709a 710a BK XI 775d 778b

4 The exchange of wealth or the circulation of commodities: the processes of commerce or trade

4a The forms of value: the distinction between use value and exchange value

9 ARISTOTLE: *Politics*, BK I, CH 9 [1257a6-41] 451a-b
35 LOCKE: *Civil Government*, CH V, SECT 37 33b; SECT 46-51 35a-36a
39 SMITH: *Wealth of Nations*, BK I, 12c-d; 13c
46 HEGEL: *Philosophy of Right*, PART I, par 63 28b-c; par 80 34a; PART III, par 204 68c-d
50 MARX: *Capital*, 13b-27c esp 13b-14c; 37a-39c; 60c; 74c-76c; 89c-d; 98a; 100c; 113d

4b Types of exchange: barter economies and money economies

6 HERODOTUS: *History*, BK IV, 158b-c
7 PLATO: *Republic*, BK I, 316c-319a / *Sophist*, 555a-c
9 ARISTOTLE: *Politics*, BK I, CH 9 450d-452b
35 LOCKE: *Civil Government*, CH V, SECT 46-51 35a-36a
38 MONTESQUIEU: *Spirit of Laws*, BK IV, 16d-17b; BK XVIII, 128a-c; BK XXII, 174a-b; 176a-c
39 SMITH: *Wealth of Nations*, BK I, 10b-13a esp 10b-11a, 13d-14a
40 GIBBON: *Decline and Fall*, 89b-d
44 BOSWELL: *Johnson*, 383b
46 HEGEL: *Philosophy of Right*, PART I, par 80 34
50 MARX: *Capital*, 37c-42b; 47a; 52c; 74c-75a

4c Rent, profit, wages, interest as the elements of price: the distinction between the real and the nominal price and between the natural and the market price of commodities

38 MONTESQUIEU: *Spirit of Laws*, BK XXII, 176a-177a
39 SMITH: *Wealth of Nations*, BK I, 13a-27b; 62a-63a,c; 73a-74d; BK II, 121c-d
42 KANT: *Science of Right*, 425a
50 MARX: *Capital*, 27a-c; 42b-47a esp 44a-b; 45c-46; 48b-49b; 74d-77b; 79b [fn 1]; 153d-156c; 265c; 270d-271a; 308b-310

4d The source of value: the labor theory of value

35 LOCKE: *Civil Government*, CH V, SECT 40-44 33d-34c
38 ROUSSEAU: *Inequality*, 353a
39 SMITH: *Wealth of Nations*, BK I, 13a-16a; 20b-23b; 27b; 37b; 52b; 62a passim
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50 MARX: *Capital*, 13a-22a esp 15, 16a, 19a-b, 20d-21a; 24c-25d; 32d-33b; 35d-36a [fn 1]; 45c-46c; 78c-d; 79a; 84a-c; 89d-102b esp 89d-90a, 91c-d, 93b-94a; 152a-156d passim; 188c-192c; 217c-d; 264a-267d esp 266c-d

4e Causes of the fluctuation of market price: supply and demand

23 HOBBES: *Leviathan*, PART I, 73b-c
38 MONTESQUIEU: *Spirit of Laws*, BK XXII, 176a-177a
39 SMITH: *Wealth of Nations*, BK I, 19d-20b; 23c-27b; 36c-37b; 62d-63a; 74d-110d esp 74d-77a; BK IV, 217a-220b
40 GIBBON: *Decline and Fall*, 656c
41 GIBBON: *Decline and Fall*, 593a-b
43 FEDERALIST: NUMBER 11, 53c-55d passim; NUMBER 35, 112a-c passim
44 BOSWELL: *Johnson*, 172c-d
50 MARX: *Capital*, 44c-d; 54a-d; 101c-102b; 153d-156c; 173c-174b; 198c-199b; 216a-c; 217c-256b; 262a passim, esp 258b-c, 258d-259b, 265; 276b-c
51 TOLSTOY: *War and Peace*, BK XI, 490a-b; BK XIII, 573a-b

4f The consequences of monopoly and competition

39 SMITH: *Wealth of Nations*, BK I, 26b-c; 63d-64a; 67b-68d; 110d; BK II, 142d; BK IV, 263d-264b; 272c-279b; 281d-282a; 287d-288c; BK V, 3 9d; 330c; 394c-395a
40 GIBBON: *Decline and Fall*, 659d-660a
50 MARX: *Capital*, 130c; 154b-156d; 174a-c; 237c-d; 248c-d; 261d-262a; 270c-271c; 292d-293a; 308d-311b; 373b-374a
50 MARX-ENGELS: *Communist Manifesto*, 421c-422a

4g Commerce between states: tariffs and bounties; free trade

5 ARISTOPHANES: *Acharnians*, 455a-469a,c esp [719-999] 463c-466d
6 HERODOTUS: *History*, BK IV, 158b-c
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7 PLATO: *Republic*, BK II, 316c-318a / *Laws*, BK XII, 788d-789a
9 ARISTOTLE: *Politics*, BK I, CH 9 [1257a21-41] 451a-b; BK III, CH 9 [1280a36-b3] 478a; BK VII, CH 6 531b-d / *Rhetoric*, BK I, CH 4 [1360a12-18] 600b-c
23 HOBBES: *Leviathan*, PART II, 119d-120c; 124c-d
38 MONTESQUIEU: *Spirit of Laws*, BK XIII, 98b-99b; BK XIX, 143c-144b; BK XX-XXI, 146a-173d; BK XXII, 177b-184b
38 ROUSSEAU: *Social Contract*, BK II, 404a-b
39 SMITH: *Wealth of Nations*, BK III, 173b-175b; BK IV, 182b-279b esp 245d-246b, 248b-252c, 256a-266d; BK V, 320b-330b
40 GIBBON: *Decline and Fall*, 21c; 23b; 151d; 655d-658b esp 657d-658b
41 GIBBON: *Decline and Fall*, 222b-d; 314c-315b; 342c-343a; 355c-d; 427c-d
42 KANT: *Judgement*, 504a-b
43 ARTICLES OF CONFEDERATION: IV [24-36] 5b-c; VI [100-106] 6b; IX [173-185] 7a; [275-285] 8a

(5 *Money* 5e *The rate of interest on money: the condemnation of usury*)

9 ARISTOTLE *Politics* BK I, CH 10 [1258ᵃ38–ᵇ8] 452d
14 PLUTARCH *Marcus Cato* 287c-d / *Lucullus* 409b-d
15 TACITUS *Annals* BK VI, 90a-c BK XI, 103c
20 AQUINAS *Summa Theologica* PART I-II, Q 105, A 2, REP 4 309d-316a; A 3, REP 3 316a-318b
21 DANTE *Divine Comedy* HELL, XI [91-115] 16a-b; XVII [34-75] 24b-c
26 SHAKESPEARE *Merchant of Venice* ACT I, SC III 409c-411b esp [41-103] 410a-c
33 PASCAL *Provincial Letters* 55a-57a
38 MONTESQUIEU *Spirit of Laws* BK V, 29c; BK XII, 92d-93c; BK XXI, 169a-170b; BK XXII, 175d-176; 183a-187a,c
39 SMITH *Wealth of Nations* BK I, 22b-d; 37b-41d; BK II, 154c-155a; BK V, 404d-405a
40 GIBBON *Decline and Fall* 498c
41 GIBBON *Decline and Fall* 90d-91a
44 BOSWELL *Johnson* 304b-c; 409a-b
46 HEGEL *Philosophy of History* PART IV, 353b-c
50 MARX *Capital* 77c-78c; 252b; 293a-d [fn 1]; 371c-372c

6 Capital

6a Comparison of capitalist production with other systems of production: the social utility of capital

38 MONTESQUIEU *Spirit of Laws* BK XIII, 96d-97a
39 SMITH *Wealth of Nations* INTRO, 1d; BK II, 148c-149a; 155b-162d; BK III, 165b-181a,c passim; BK IV, 239d-240a
40 GIBBON *Decline and Fall* 17b-c; 144b; 619b-620c; 628c-d
46 HEGEL *Philosophy of Right* PART II, par 199 67c / *Philosophy of History* PART IV, 335a-336c
49 DARWIN *Descent of Man* 324a-b
50 MARX *Capital* 33b-37; 95a-b [fn 1]; 104d-105; 113c-115c; 150b; 160d-164a esp 160d-161b, 163a-c; 171d-176a; 239d-240c; 266c-267c; 281-b; 295d-296a; 354c-304a passim; 377; 383d
50 MARX-ENGELS *Communist Manifesto* 419d-423a; 428d-429c

6b Theories of the nature, origin, and growth of capital stock: thrift, savings, excesses beyond the needs of consumption, expropriation

35 LOCKE *Civil Government* CH V, 30b-36a
39 SMITH *Wealth of Nations* BK I, 117a-c; 142d-151c
46 HEGEL *Philosophy of Right* PART III, par 170 60d; par 199-2 8 67c-69c
50 MARX *Capital* 69b-74; 79a; 89d-94c esp 93d-94a; 101a-b; 105b [fn 1]; 221c-d; 279a-377a esp 279a-282a, 286a-288a, 289b-290c, 296a, 301b-302d, 319b-d, 354a-355d, 372a-d

6c Types of capital: fixed and circulating, or constant and variable capital

39 SMITH *Wealth of Nations* BK II, 118a-121c; 122b-124c; 151c-162d passim
50 MARX *Capital* 96a-102b esp 101a-c; 280d-282a; 291c-d; 302d-303b; 307c-309b; 311c-312c

6d Capital profits

6d(1) The distinction of profit from rent, interest, and wages

39 SMITH *Wealth of Nations* BK I, 20b-23b esp 22d-23b; 28a; 47c-48a; 109d-110d
50 MARX *Capital* 255a-256a; 301b-302d

6d(2) The source of profit: marginal or surplus value, unearned increment, and the exploitation of labor

39 SMITH *Wealth of Nations* BK I, 20b-21c; 27b-28a; 109d-110d
46 HEGEL *Philosophy of Right* PART III, par 243 77b-c
50 MARX *Capital* 69a-275c esp 71a-79a, 89c-96a, 99d-100b [fn 2], 100a-101b, 104b-105c, 112c-113c, 115c-117c, 129b, 154d-156d, 192d-194b, 197a-200a, 251c-256, 263c-d, 271b-c, 285c-286a, 314d-315c, 375c-376c

6d(3) Factors determining the variable rate of capital profit

39 SMITH *Wealth of Nations* BK I, 6d-8b; 21a-b; 37b-62a; 110b-d; BK II, 151c-155b esp 153a-b, 154b-c; 155b-162d passim
50 MARX *Capital* 102b-113c; 146c-151a,c; 255b-263d; 296b-301b

6d(4) The justification of profit: the reward of enterprise and indemnification for risk of losses

25 MONTAIGNE *Essays* 42a-b
33 PASCAL *Provincial Letters* 55a-57a
39 SMITH *Wealth of Nations* BK I, 20d-21c; BK II, 142d-151c passim; 155b-162d passim, esp 162a-b
44 BOSWELL *Johnson* 279b-280a

6e The recurrence of crises in the capitalist economy: depressions, unemployment, the diminishing rate of profit

50 MARX *Capital* 11d; 64c-d esp 64d [fn 2-3]; 100a; 116c-d; 222d-225d; 311c-316d esp 312b-313d, 314a, 315c-316a; 319a; 330d-333c
50 MARX-ENGELS *Communist Manifesto* 422a-c

7 Property

7a The right of property: the protection of property as the function of government

20 AQUINAS *Summa Theologica* PART I-II, Q 94, A 5, REP 3 224d-225d
35 LOCKE *Toleration* 16a-c / *Civil Government*

7b Kinds of economic property

7b(1) Chattel slaves as property

7b(2) Property in land

7b(3) Property in capital goods and in monetary wealth

7c The uses of property for production, consumption, or exchange

7d The ownership of property: possession or title; the legal regulation of property

51 TOLSTOY *W a and Peace* BK I 26a 30a 38d 41a 45b-47b BK VIII 306a 309d 310d E LOGUE I 650d 652a

8 The distribution of wealth the problem of poverty

7 PLATO *Laws* BK V 691d 696d BK VIII 738d 741d
9 ARI TOTLE *Polit cs* BK II CH 9 [1270 15 ᵇ6] 466b c / *Athenian Con t tuti n* CH 12 557b 558a
15 TA ITU *A nals* K II 31a b
23 HO S *Lev ath n* PART I 124d 126a
35 LO KE *C vil Governm nt* CH V 30b 36a
36 SWIFT *Gull ver* ART IV 154b 155b
38 ROU EAU *P l tical Ec nomy* 375b d / *Social Cont ct* BK II 405b-c
39 S ITH *W alth of Nat ns* BK I 20b 63a c K I 121c d 142d 151 esp 150b 151
40 GIBBON *Decl ne and F ll* 22c 89d 486c d 501c
43 MILL *Liberty* 309a / *Repr entat Govern ment* 366c 367a / *Utilit ia ism* 472d 473a
44 BOSW LL *Johns* 124d 125c
46 HE L *Philos phy of Right* PART I par 49 24c 25a P RT III par 244 245 77c d ADDI TI NS 29 121c 49 140d 141a / *Ph losophy of History* INTRO 193b ART I 226d 227b P R II 263b d 277b c
49 DAR IN *D cent of M* 324a-c
50 MARX *Cap t l* 34d 35c 218d 219d 261d 262a 301b 302d 319d 321b 354b c
50 M RX ENGEL *Comm t M ifesto* 425d 426d 428d 429a
52 DOS O SKY *Brothers Karama ov* BK VI 165b 166a
54 FREUD *Civ l at on nd Its D scontents* 787d 788b [fn 3]

8a The shar ng of we lth good nd lands held in common public own h p of the means of product on

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5 AR STOPHAN *Ec l zu a* 615a 628d esp [395 476] 619b 620a [553-7 9] 621b 623c
7 PL TO *Republic* K 341c d BK V 364c 365d / *C t s* 480a 481a b
9 A IST TLE *Eth cs* K V H 9 411d 412 / *Polit s* BK II CH I [26 30- 6 ᵃ7] 455b d *CH 5 458a 460a CH 7 461d 463c CH* [272 12 2] 468b c BK III C I 10 [1281 13 23] 478d-479a K V CH 8 [13 9 5 17] 511b BK VI H 10 [13 0ᵇ37- 330ᵃ33] 534b d / *Athen an C nst t tio* CH II par 2 557a b CH 12 par 3 557c d
14 PLUTARCH *Lycurgus* 36a 37b / *Numa Pom pil s* 58a d / *Ag s* 648b d 656d / *Cleomenes* 657a 663c / *Tiber G cchu* 674c 681a c
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19 AQU N S *Summa Th l g a* P RT Q 98 A I RE 3 516d 517c
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31 SPINOZA *Ethics* PART IV A PENDIX XVII 448d
35 LOCKE *C vil Government* CH V SECT 24 29 30b 31c SECT 34 32b c
38 MONT QUIEU *Spirit f Laws* BK IV 16a 17b
40 GIBBON *De l n a d Fall* 197b c
44 BOSWELL *Johnson* 222d 223a
46 HEGEL *Ph lo ophy of Right* P RT I par 46 23d 24a par 64-65 28c 29a PART III par 170-17 60d 61a ADDITIONS 27 121b / *Ph l phy f History* PART I 226d 227b 240d 241a
50 MARX *Capital* 34d 35a 163a d 174d 175c 377c 378d
50 MARX ENGELS *Commum t Ma festo* 425d 426a

8b The di is on of common goods into pri v te property factors nfluencing the in crease and decre se of pr ate property

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6 HER OTUS *Hist ry* BK II 70b c BK III 101d 102a
9 AR STOTLE *Polit cs* BK II CH 5 [263ᵇ5-8] 458c BK VI CH 5 [1320ᵃ29-ᵇ7] 523d 524a
15 TACITU *Annal* BK I 31a b
19 AQUINAS *Si mma Th olog ca* PART I Q 98 A LP 3 516d 517c
20 AQUINA *Summa Th eol gica* PART I II Q 94 A 5 R 3 224d 225d
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38 MONT SQUIEU *Sp rit f Laws* K V 19d 21d BK XVIII 127c
38 ROU SEAU *I equality* 348b d 352a / *Social C nt ct* K I 393d 394d
39 S I T I *W lth of Nat o s* K I 20b 21c 27b 28a BK V 239 d K V 309a-c 311b-c
41 G BBON *Decl e and Fall* 87a
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50 M RX *Capital* 288b d 358a 361d 368c *369a 377 378d 383d*

8c The c u es of po erty compet tion in compet nce ind gence expropr tion unemployment the poverty of the pro letar t as d spossessed of the instru ments of prod ct on

14 PLUTAR H *Lyc gi s* 36a 37b / *Lycurgus Numa* 62b-c / *Li c llus* 409b d
15 TACITUS *Histories* BK I 194d 195a
36 S I T *Gull er* P RT IV 154b-155b
38 MONTESQUIEU *Sp it of Law* K XX W A XXI I 190a b 191b-c 199b 200a-c

(8 *The distribution of wealth: the problem of poverty* 8c *The causes of poverty: competition, incompetence, indigence, expropriation, unemployment; the poverty of the proletariat as dispossessed of the instruments of production*)

38 ROUSSEAU *Inequality* 365c 366a / *Political Economy* 375b d / *Social Contract* BK III 415b d
39 SMITH *Wealth of Nations* BK I 27b 37b esp 28a d 30b 31b BK IV 239c 240a
40 GIBBON *Decline and Fall* 501c d
44 BOSWELL *Johnson* 428b
46 HEGEL *Philosophy of Right* PART III par 195 66d 67a par 240-241 76d 77a par 243 44 77b c ADDITIONS 148 149 140c 141a
50 MARX *Capital* 150b c 160d 162d 209c 225d esp 211a d 280c 286a esp 282b-c 283b d 285c 286a 288b d 303b 305a 307a c 315c 321b esp 319c d 325d 327b 349a 350a 354a 355d 357a 358a 360a 361c 364a c 370a 371c 375a b
50 MARX ENGELS *Communist Manifesto* 424d 425a 426c d

8d Laws concerning poverty: the poor laws, the dole

OLD TESTAMENT *Exodus* 23 11 / *Leviticus* 19 9-10 23 22 25 25 35-54 / *Deuteronomy* 5 7 11 24 17 22 26 12 13
5 ARISTOPHANES *Ecclesiazusae* [4 8 426] 619b c
7 PLATO *Republic* BK V 342a 344a / *Laws* BK V 695a-c BK XI 783b
9 ARISTOTLE *Politics* BK VI CH 5 [1320a29-b15] 523d 524b
14 PLUTARCH *Solon* 68d 70c / *Poplicola Solon* 87a / *Pericles* 127a 128a / *Lucullus* 409b d / *Caesar* 581c d
15 TACITUS *Annals* BK II 32b d
23 HOBBES *Leviathan* PART II 142b c 157a
31 SPINOZA *Ethics* PART IV APPENDIX XVII 448d
38 MONTESQUIEU *Spirit of Laws* BK XXIII 199b 200a c
38 ROUSSEAU *Political Economy* 375b-d
39 SMITH *Wealth of Nations* BK I 59a 61b BK IV 200c 201a
40 GIBBON *Decline and Fall* 175c d 501d 502b
42 KANT *Science of Right* 443b 444a
43 MILL *Liberty* 322a d esp 322c d / *Representative Government* 383d 384a
44 BOSWELL *Johnson* 442d-443a
46 HEGEL *Philosophy of Right* PART III par 245 77c d
50 MARX *Capital* 211d [fn 3] 358a b esp 358b d [fn 5] 364a 366

9 Political economy: the nature of the science of economics

9 ARISTOTLE *Ethics* BK I CH 1 2 339a d passim esp CH 1 [1094a7-9] 339a / *Politics* BK I CH 8 [1256b27 39] 450c d CH 10 [12 8 19-38] 452b-c
38 ROUSSEAU *Political Economy* 367a 385a c
39 SMITH *Wealth of Nations* INTRO 1d 2a c BK IV 182a
44 BOSWELL *Johnson* 281b c
46 HEGEL *Philosophy of Right* PART III par 189 65d 66a ADDITIONS 120 136b c
50 MARX *Capital* 6a d 8a 11d passim 33a 37 esp 36a b [fn 1] 178d 179c 305a c [fn 2]

9a Wealth as an element in the political common good

5 EURIPIDES *Phoenician Maidens* [528-558] 382c d
5 ARISTOPHANES *Plutus* 629a 642d esp [415-618] 633d 636d
6 HERODOTUS *History* BK IX 314a c
6 THUCYDIDES *Peloponnesian War* BK I 352a b BK II 396d 397b-c BK VIII 569d
7 PLATO *Republic* BK III IV 341c 344a BK V 364c 365d BK VIII 405c 408a / *Critias* 485b c / *Laws* BK III 665b BK V 687d 688a 694a 695c BK VIII 733b d
9 ARISTOTLE *Politics* BK I CH 10 [1258 19-38] 452b-c BK II CH 7 [1267 18 36] 462d 463a CH 9 [1269b13 1270b6] 465d 466c [1271b1 1] 467d BK III CH 12 [1283 12 20] 481a b BK VII CH 2 [1324 8 10] 528a CH 4 [1325b33 1326 4] 530a CH 5 6 530d 531d CH 8 532c 533a / *Rhetoric* BK I CH 4 [1359b19-29] 599d 600
14 PLUTARCH *Lycurgus* 36a 37b 47d / *Lycurgus Numa* 62b c / *Coriolanus* 180b d / *Aristides Marcus Cato* 291b 292b / *Lysander* 361a d / *Agis* 649b c
15 TACITUS *Annals* BK II 31a b BK III 57b 58d BK XIII 140b c / *Histories* BK II 232d 233a
23 MACHIAVELLI *Prince* CH XXI 32d 33a
23 HOBBES *Leviathan* INTRO 47a b PART II 124b 127a
38 MONTESQUIEU *Spirit of Laws* BK V 19a 21d 23a 25c BK VII 44a 48a BK XIII 96c BK XX 146b 147d BK XXI 153c d 154b
38 ROUSSEAU *Inequality* 325d 327c 328a 352a 355a passim 365c 366b / *Political Economy* 375b d 377b 385a c passim / *Social Contract* BK III 415b 417a 421c d
39 SMITH *Wealth of Nations* BK I 27b 31b 33c 35c
40 GIBBON *Decline and Fall* 89 d 456d 457a c 498 501d 642a b 655d 656
42 KANT *Science of Right* 443b d
43 FEDERALIST NUMBER 21 79b 80a
44 BOSWELL *Johnson* 124d 125c 172b 173a 210d 211b 281b
46 HEGEL *Philosophy of Right* ADDITIONS 143 139d 140a / *Philosophy of History* INTRO 193b c PART II 263b d
49 DARWIN *Descent of Man* 324 d
50 MARX *Capital* 292d 320b 321b 374a-c
51 TOLSTOY *War and Peace* BK XIII 572d 573b

(9e *The economic support of government and the services of government 9e(1) The charges of government: the cost of maintaining its services; elements in the national budget*)

43 CONSTITUTION OF THE U S: ARTICLE I, SECT 6 [132-135] 12c; [143-148] 12d; SECT 8 [156-229] 13b-c; [235-253] 13c passim; SECT 9 [283-288] 13d-14a; ARTICLE II, SECT 1 [394-400] 15a; ARTICLE III, SECT 1 [463-468] 15c; ARTICLE VI [578-582] 16d; AMENDMENTS, XIV, SECT 4 19a

43 FEDERALIST: NUMBER 13, 59a-60a; NUMBER 30-31 101a-107b esp NUMBER 30, 101a-b; NUMBER 34 109b-111d; NUMBER 43, 142d-143a; NUMBER 73, 218d-219b; NUMBER 79 233c-234a; NUMBER 84, 254c-256a

44 BOSWELL *Johnson* 281d-282a

46 HEGEL *Philosophy of History*, PART IV, 365c-d

9e(2) Methods of defraying the expenses of government: taxation and other forms of levy or impost; confiscations, seizures, and other abuses of taxation

OLD TESTAMENT *Genesis*, 41:33-36

APOCRYPHA *I Machabees*, 10:25-31—(D) OT, *I Machabees*, 10:25-31

5 ARISTOPHANES *Wasps* [653-724] 515c-516d / *Birds* [27-48] 542c-d

6 HERODOTUS *History*, BK I, 43c; BK III, 109d-111b; 114b

6 THUCYDIDES *Peloponnesian War*, BK I, 373b-c; BK III, 420d-421b

7 PLATO *Laws*, BK X, 791d

9 ARISTOTLE *Politics*, BK I, CH II [1259a23-36] 453d; BK VI, CH 5 [1320a20-b2] 523d / *Athenian Constitution*, CH 47-48 574b-575b

14 PLUTARCH *Aristides*, 274c-d / *Marcus Cato* 285d / *Lucullus*, 409b-d

15 TACITUS *Annals*, BK V, 82d-83a; BK XIII, 139a-c / *Histories*, BK I, 194d-195a; BK II, 236d-237a

23 MACHIAVELLI *Prince*, CH XVI, 22d-23b

23 HOBBES *Leviathan*, PART I, 78c-d; PART II, 104b-d; 152b; 156a-157a

27 SHAKESPEARE *Cymbeline*, ACT I, SC I 463c-464c / *Henry VIII*, ACT I, SC II [18-101] 552d-553d

35 LOCKE *Civil Government*, CH XI, SECT 140 58a

36 SWIFT *Gulliver*, PART I, 11b-12a; 29b-31a; PART II, 75a-b; PART III, 113b-114a

38 MONTESQUIEU *Spirit of Laws*, BK V, 23c-24b; BK XI, 96a-102c; BK XIX, 143b-c; BK XX, 149d-150a; BK XXII, 183b-184b

38 ROUSSEAU *Political Economy*, 377b-385a,c / *Social Contract*, BK I, 415b-417a

39 SMITH *Wealth of Nations*, BK IV, 192c-288c esp 192c-233d, 279b-288c; BK V, 311c-313a; 315a-319d; 356d-421d,e p 361b-d, 401d

40 GIBBON *Decline and Fall*, 41b-c; 64d-68a; 86a; 162c; 251d-255c; 368a-b; 413a; 577d-578c; 658c-660c esp 659c-660c

41 GIBBON *Decline and Fall*, 177b; 417b-c

42 KANT *Science of Right*, 441d-444c

43 DECLARATION OF INDEPENDENCE: [63-70] 2b

43 ARTICLES OF CONFEDERATION: IV [24-36] 5b-c; VI [100-106] 6b; VIII 6d-7a; IX [186-190] 8a; [299-318] 8b; [350-367] 8c-d passim

43 CONSTITUTION OF THE U S: ARTICLE I, SECT 2 [17-40] 11b-d; SECT 7 [152-155] 12d; SECT 8 [192-200] 13a; SECT 9 13d-14a passim; SECT 10 [296-313] 14a; AMENDMENTS, XVI 17b-c; XXI 19b

43 FEDERALIST: NUMBER 7, 43c-44a; NUMBER 12, 56d-58d; NUMBER 21, 79b-80c; NUMBER 30-36 101a-117d; NUMBER 41, 135b-c; NUMBER 44, 145b-c; NUMBER 45, 149b-150b; NUMBER 83, 246b-c; NUMBER 84, 253b [fn 1]

43 MILL *Liberty*, 315c-d / *Representative Government*, 335a-b; 356c-d; 366d-367a; 383b-d / *Utilitarianism*, 473a-c

46 HEGEL *Philosophy of Right*, PART III, par 299 99c-100b; ADDITIONS, 177 147d / *Philosophy of History*, PART I, 226d-227b; 243b; PART III, 299a-c; 310c; PART IV, 324b-325b,c; 335a-336c; 364d

50 MARX *Capital*, 65c-66a; 375a-b

50 MARX-ENGELS *Communist Manifesto*, 429a

51 TOLSTOY *War and Peace*, BK IX, 384c-388a,c

9f Wealth or property in relation to different forms of government

6 THUCYDIDES *Peloponnesian War*, BK I, 350d-351a; 352d; BK VIII, 575d-576b; 579c-590c

7 PLATO *Republic*, BK II, 316c-319; BK VIII, 401d-416a / *Laws*, BK V, 695a-c

9 ARISTOTLE *Ethics*, BK V, CH 3 [1131a24-29] 378d; BK VIII, CH 10 [1160a31-b16] 412d; [1160b33-1161a2] 413b / *Politics*, BK II, CH 11 [1273a3-b7] 469c-470a; BK III, CH 7 476d-477a esp [1279b4-10] 476d-477a; CH 8-10 477a-479a passim; CH 11 [1282a24-41] 480a-b; CH 13 [1283a23-1284a2] 481b-482a; CH 15 [1286b8-22] 484d-485a; BK IV, CH 3 [1289b8-1290a13] 488d-489a; CH 4 [1290a30-b20] 489b-d; [1291b7-13] 490d; CH 6 [1293a12-34] 492d-493a; CH 9 [1294b19-30] 494c-d; BK V, CH 7 502a-503b; CH 8 [1308b10-1309a3] 510d-511a; CH 12 [1316b15-22] 519d; BK VI, CH 3-6 521c-524c / *Athenian Constitution*, CH 2-5 553a-555a; CH 11-12 557a-558a / *Rhetoric*, BK I, CH 8 [1366a3-6] 608b

14 PLUTARCH *Lycurgus*, 36a-37b; 47a-48a / *Solon*, 68d-71c / *Poplicola-Solon*, 87a / *Pericles*, 125b-130d / *Coriolanus*, 180b-d / *Lysander*, 361a-d / *Lucullus*, 400d-401a / *Agis* 649b-650d

20 AQUINAS *Summa Theologica*, PART I-II, Q 95, A 4, ANS 229b-230c; Q 105, A 2, ANS and REP 1-6 309d-316a

23 HOBBES *Leviathan*, PART II, 124d-125c; 150a-154b,c

35 LOCKE *Civil Government*, CH VII, SECT 85 43c-d; SECT 90-94 44d-46c passim; CH XI, SECT 138 57b-c; CH XV, SECT 173-174 65c-d

38 MONTESQUIEU *Spirit of Laws*, BK I, 3d; BK II, 10a; BK IV, 16d-17b; 17d-18a; BK V, 19a

(9 *Polit cal economy the nature of the science of economics 9b The struggle of economic classes for polit cal pow r*)

46 HEGEL *Philosophy of R ght* ADDITIONS 149 140d 141a / *Philosophy of History* INTRO 193b c PART II 263b d 275b 276a PART III 295d 297a

50 MARX *Capital* 6d 7d esp 7b d 8a 9c 63b-c 113c 134c 146c esp 145a

50 MARX ENGELS *Communist Manifesto* 415a 434d esp 415b c 416c d 420b c 423b 425c 429b c 434c d

52 DOSTOEVSKY *Brothers Karama ov* BK VI 165b 166a

54 FREUD *New I trodi ctory Lectu es* 882b 884d

10 The moral aspects of wealth and poverty

10a The nature of wealth as a good its place in the order of goods and its relation to happ ness

OLD TESTAMENT *I K gs* 3 6-14—(D) *III K ngs* 3 6-14 / *II Ch onicl* 1 1 —(D) *II Par li pomenon* 1 7 12 / *Job* 21 7 13 3 4 28 36 18-19 / *Psalms* 49 52 7—(D) *Psalms* 48 51 9 / *Proverbs* 1 19 8 10 11 10 2 11 4 28 13 7 14 0 15 16-17 16 8 17 1 19 4 6-7 22 1 23 4 5 27 24 8 6 11 0 22 / *Eccl ias tes* 2 3 11 4 6-8 5 9-6 2 esp 5 3 15 5 19-2 6 7 1 10 9—(D) *E cl siast s* 2 3 1 4 6-8 5 8-6 e p 5 12 14 5 18 19 6 2 7 13 10 19 / *Jeremiah* 9.23 24—(D) *Jeremias* 9 3 4 / *E ek l* 7 19—(D) *E echiel* 7 9 / *Zepha i h* 1 18—(D) *Sopho ias* 1 18

APO RYPH *Tobit* 4 21—(D) OT *Tob as* 4 23 / *Wi dom of S lom n* 5 8 12 7 7 11—(D) OT *Book of Wisdom* 5 8 2 7 7 11 / *Ec cle iast cu* 7 8 19 8 2 1 30 3 11 18 7 12 8 13 esp 13 1 7 13 19-24 20 30 29 22 3 30 14 6 31 1 11 40 25 6—(D) OT *Ec cles a ticus* 7.20-21 8 2 3 0 33 34 11 8 29 12 8 13 esp 13 1-8 13.23 30 2 3 29 28 29 30 14 16 31 1 11 40 25 27 / *Baruc* 3 16-19—(D) OT *Baruch* 3 16 9

NEW TES MENT *Matthew* 6 9-34 13 18 23 19 16-30 / *M k* 4 20 esp 4 19 10 17 31 / *Lu k* 6 20-26 8 5 15 esp 8 14 2 3 34 16 19-25 18 18 3 / *I T mothy* 6 6-12 17 19 / *J mes* 5 1-6

5 AES HYLUS *Pe s ans* [16 169] 17a

5 EU IPIDE *El tra* [36 400] 330b d [420 431] 331a [938-944] 335c / *He ba* [06 1232] 363b / *Phoen cian Maid ns* [383 44] 381 d [525-567] 382c d / *Cyclops* [316-346] 443b

5 ARISTO H NES *B ds* [59 -f 5] 5 0a b / *Pl tus* [76-197] 630 631b [415-618] 633d 636d

6 HERODOTUS *H st y* BK I 6c 8a BK II 121b c K V 169d 170a BK VII 264c

6 THUCYDIDES *P l pon es a W a* BK I 350d 351a

7 PLATO *Euthydemus* 74b c / *Meno* 177d 178d / *Apology* 206b c / *Gorgias* 254d 255b / *Republ c* BK I 296c 297b BK III 325b c BK III IV 341c 343b / *Critias* 479d 485b-c / *Laws* BK IX 751

8 ARISTOTLE *Topics* BK III CH 1 [116] 162a [116b-2 11, 4] 163b c CH 3 [118b1-9] 165b c / *Sophistical Refutations* CH 25 [18 b7 11] 248d

9 ARISTOTLE *Ethics* BK I CH 1 2 339a d passim CH 3 [1094b17-19] 339d CH 4 [1095 14 9] 340b c CH 5 [1096 5 10] 341a b CH 7 [1097 15 b8] 342c d passim esp [1097 25 28] 342c CH 8 [1099 31-b8] 344d 345a BK IV CH 3 [1124 13 b6] 371a b CH 7 [1127b9-2] 374d 375a BK V CH 2 [1130 13 b1] 377c 378a BK X CH 3 [1173b25 27] 428a / *Politics* BK I CH 9 10 450d 452d K III CH 1 [1 83 12 20] 481a b BK VII CH 1 [1323 22] CH 2 [1324 10] 527a 528a CH 8 532c 533a / *Rhetor c* BK I CH 1 [1355b1 8] 594d CH 5 [1360b14 30] 601a b [1361 12 24] 601c d CH 6 [1362b10 28] 603b c esp [1362b18 19] 603c BK II CH 16 638b c

12 LUCRETIUS *Nature of Things* BK II [1 54] 15a d BK V [1113 1135] 75c d BK VI [1 34] 80a c

12 EPICTETUS *Discou ses* BK II CH 19 16 c 164b BK IV CH 6 230b 232c

12 AURELIUS *Med tat* BK VIII SECT 33 288a

14 PLUTARCH *Lycurgus* 36 37b / *Pericles* 130b c / *Pelopidas* 233a b / *Marcus Cato* 285c d / *A i t des Marcus Cato* 291b 292b / *Lys nder* 361a d

15 TACITUS *Annals* BK VI 91c BK XIV 154a-c / *Histori s* BK II 232d 233a

18 AUGUSTIN *City of God* BK I CH 8-10 133a 130c

19 AQUINAS *Summa Theolog ca* ART I Q 26 A 4 ANS and REP 151c 152a c PART I II Q I A 7 ANS 614c 615a Q 2 A 1 615d 616c A 5 REP 1 618d 619c Q 4 A 7 635b 636a

21 DANTE *D vine Comedy* HELL VII [1-96] 9- 10c PURGATORY XV [40-8] 75d 76 XVII [127 39] 79d XIX [70] XXII [114] 82b 87c

22 CHAUCER *P ologue f Man of Law s Tale* [4519-4546] 235b 236a / *Tale of W fe f Bath* [669 -6 88] 274b 276a / *Tale of Mel be s par* 49-53 422a 425b par 77 430b 431a

23 MACHIAVELLI *Prince* CH XVI 24b c CH XX 26a b CH XXV 35c

23 HOBBES *Leviathan* PART I 74d 75a 90c PART I 155b c

25 MONTAIGN *Essays* 110a 122a 1 4d 126b 131a passim

26 SHAKESPEARE *Romeo and Juliet* ACT V SC 1 [66 86] 315b / *King John* ACT I SC 1 [61 598] 385c 386a / *As You Lik It* ACT II SC V [40-59] 606d

27 SHAKESPEARE *Othello* ACT I SC III [339-38] 212c d ACT II SC III [154 161] 223d / *Timon of Athens* 393 420d esp ACT IV SC II 410a c SC II [3 47] 410d-411a [382 462] 415a d /

10b Natur l limit to the acquis t on of wealth by ind id ls the dist nction between n c ss ties and luxuries

10c Temper nce and intempe ance with re spect to wealth libe ality m gnificence miserline a arice

(10 *The moral asp cts of wealth and poverty* 10c *Tempera ice and intemperance with respect to wealth l beral ty magn ficence miserl ss avar e*)

New Testam nt *Luke* 6 34–35 12 13 1 / *Acts* 20 33–34 / *I C rinthi ns* 5 10 11 6 10 / *Ephesians* 5 3 / *I Timothy* 6 6 12 / *H brews* 13 5 / *James* 5 1–6

5 Eurip des *Hecuba* [1206 123] 363b

5 Aristo hanes *W a ps* [653 724] 515c 516d / *Plutus* [144 197] 630d 631b

6 Herodotus *Hi tory* bk iii 105b c bk vi 208d 209 211a b bk vii 221c 222a k ix 305d 306a

6 Thucydid s *Peloponnesian War* bk vi 512c 513d

7 Plato *Republic* bk vi i 405c 408a / *C itias* 485b c / *Laws* k vii 733b 734a bk ix 751c d

9 Aristotle *Ethics* b k i ch 3 [094^{b}17 19] 339d k ii ch 7 [1 7^{b}9 1] 353 b bk iv ch 1 2 366b d 370b ch 3 [1124 13 ^{b}6] 371a b bk v ch ~ [113 4 28] 377d bk v h 4 [1147^b~4–1148 4] 398a b / *Pol ti* bk i ch 5 [1263^{a}22–^{b} 6] 458b d ch 6 [126 8 37] 460c d ch 7 [1266^b 4 126 ^{b}9] 462b 463b ch 9 [1269^{b}13 1270 14] 465d 466b [1271^{b}10–17] 467d bk v h 9 [310^{a}22 5] 512c k vi ch 7 [13 1 35 ^{b}2] 525a bk v ch 5 [326^{b}26–38] 530d 531 / *Athe ia Co stitut on* ch 5 par 3 554d 555a ch pa 557c / *Rh tor c* bk i c 9 [366 33 ^{b}] 608d 609a

12 Lucret us *Nat r e of Things* bk iii [59–78] 30d 31a bk v [1113 135] 75c d

12 Epictetus *Disco ses* bk v c 1 9 237d 238a

12 Aurelius *Med tatior* bk vii s ct 7 281d bk viii s t 33 288a

14 Plutarc i *Ly i g is* 36a 37b / *Lycu Numa* 62b c / *Cori lan s* 178 179a / *Aem il us Paulu* 218a d 223 224a / *Pelopidas* 233 b / *M u C to* 276b d 290d esp 287c d / *A stides Ma ci Cat* 291b 292b / *Lys de* 361a d / *Lysander Sulla* 388b / *C mon* 394b 395a / *Lucull s* 419 420b / *Cr su* 439a c / *Dem triu* 738c / *A tony* 755d 758c / *Marcus B t us* 817d 818a

15 Tacitus *A n ls* k ii 31a b 35c d k ii 57b 58d / *H st ies* k i 194d 195a

18 Au u tine *Conf ssions* bk vi par 16 40a c

20 Aquinas *S mma Theol gi* part i q 60 a 5 ans 53a 54d q 63 a i r p 70b 72a q 84 a 174b 175a

21 D nte *Di n C medy* i ell, vi [–96] 9 10c xi 15a 16b esp [01 15] 16 b x ii [34–75] 24b c xix 26d 28b xx x [1 139] 44b c purgatory xix [70] xx i [114] 82b 87c

22 Ch ucer *Tale f Mel b u* par 52–53 424a 426a / *Pa so s T le* p r 27 512a 514b

23 M chiav lli *Prin e* c xv 22d 23c

23 Hobb s *Leviathan* part i 73a 75a

24 Rabelais *Ga gantua and P n igruel* bk i 62c d bk iii 133b 140b

25 Montaigne *Essays* 110a c 122a 124d 436c 439c 462b c

27 Shakes eare *Timon of Ath n* 393a 420d esp act i sc ii [197 211] 399b act ii sc ii 400 403b

29 C rvantes *Don Quixote* part ii 221d 222c

31 Spinoza *Ethics* part iv appendix xxviii xxix 450a

33 Pa cal *Provincial Letters* 91a 94a

35 Locke *Civil Government* ch v sect 30–39 31c 33c

36 S ift *Gulli er* part ii 53a 56a

37 Fielding *Tom Jones* 68d 87b 88 291d 292a 362c 363a

38 Montesquieu *Spirit of Laws* bk iii 10a bk v 19a 21d bk vii 44d 45b bk xix 140c d bk xx 146b c 152a b bk xx 211 c

38 Rousseau *Inequality* 360b 361a / *Social Co tract* bk ii 405b c bk i i 411a b 412b c 421c d

39 S ith *Wealth of Nations* bk ii 142d 151c bk iv 189d 190a k v 346c 347d

40 G bbon *Decl ne and Fall* 139b 140c passim 155d 156a 339d 340c 510b c 660d 661c

44 Bo ell *Johnson* 194c 195a 295c 319b 403a 447b-c

46 Hegel *Philosophy of Right* p rt iii par 240 76d / *Ph losophy of History* p rt iv 353b c

47 Goethe *Faust* art ii [5646–5663] 139a b [5767 5796] 141b 142b

50 M rx *Capit l* 60d 62b 72a c 292d 295d

51 Tolstoy *W a and Peace* bk i 25 32 p s sim bk v 197b c k vii 275a 278c 291a 292b bk vii vi 301b 303 bk ii 329c 332a k x 414c 416c k xi 490a-493d 500d 503a k xiii 569 586c bk xv 633a d ep logu i 650d 652a 664c 665a

52 Dosto vsky *Brothers Ka ama o* bk vi 164b 165a

53 J mes *Psy hology* 725b 726a

10d The principles of justice with respect to wealth and property fa r wages a d prices

Old T sta ent *Exod is* o 15 17 / *Leviticus* 19 1 35 36 25 35–37 / *Deu er n my* 5 19 21 24 10 15 25 3 16 27 17 / *II Samu l* 12 1–6 —(D) *II Kin* 1–6 / *I Ki gs* 21—(D) *III Ki gs* 21 / *II K ng* 5 20– 7—(D) *IV K ngs* 5 o 7 / *N hemiah* 5 12—(D) *II Esdras* 5 1– 2 / *Job* 24 / *P o erbs* 1 o– 9 6 30–31 11 14 31 16 11 20 10 1 6–, 22 16 22 3 28 23 10–11 28 8 24 30 8–9 / *Is iah* 3 14 15 10 2—(D) *Isaias* 3 14 15 10 1 2 / *Jerem ah* 17 11—(D) *Jeremias* 17 11 / *E ek iel* 22 12 13 25 29 45 9–12—(D) *E ech el* 22 12 13 25 29 45 9–12 / *Am s* 2 6 7 5 11 12 8 1–7 esp 8 4–6 / *M cah* 6 9–12—(D) *M ch as* 6 9 12 / *Zechariah* 5 3—(D) *Zacha ri s* 5 3

A Y H *Eccl t cus* 5 8 14 2 25 26 29 2 2 9 19 34 8 2 —(D) OT *Ecclesia ti cus* 5 10 16 17 20 27 26.28 27 2 29.25 34.2 27

NEW TESTAMENT *Matthew* 10 10 19 18 / *Mark* 10 9 / *Luk* 3 12 13 10 7 18.20 / *Acts* 2 44 47 4 3-5 1 / *Roma s* 13 9 / *I Co in thians* 6 1 / *Ephesians* 4 28 / *I Tim tl y* 5 18 / *II Timothy* 6

5 EUR D S *Helen* [903-908] 306d 307a / *Pl emcian M dens* [528-567] 382c d

5 ARISTO HANES *Plut is* 629 642d esp [76-111] 630a b

6 HERODOTUS *History* K II 73b 74d 87a b BK 158b-c BK VI 201d 202c BK VII 245b K VIII 260d 261a

7 PL O *Republ* BK I 297a c BK I 316a 319b BK II-V 340c 343a BK V 364c 365d / *Laws* BK VIII 738 743 K XI 772d 775d / *Seventh Letter* 814b c

9 ARI TOTL *Ethics* K V CH 2 [1130 13 b17] 377c 378a CH 4 [3 b11]-CH 5 [1133b29] 380b 381 K I CH 9 411d 412c H 3 14 414d-416d p s m BK IX CH I 416b d 417 / *Polit s* BK I CH 3 446d-453d pass m BK II H 5 458a-460a CH 7 461d-463c K V CH I [13 1a25-b2] 502b c / *Ath C n stitut n* CH 12 557b 558

12 AURE IU *Meditati s* BK VI I S CT 33 288a

14 PLUTARCH *Lycu gus* 36a 37b / *S l n* 68d 70c / *Popl cola Solon* 87a / *Cras us N ias* 455b d

15 T CITUS *A als* K I 31a b / *H stories* BK I 236d 237a K IV 286c 287

19 AQUINA *Summa The l g a* ART Q 2 A I 124b 125b Q 98 A I R 3 516d 517

20 AQU N S *Summa Th l g ca* ART Q 94 A 5 RE 3 224d 225d Q 95 A 4 AN 229b-230 Q 105 A ANS and R 3-6 309d 316a

21 DANTE *D n Com dy* L X 15a 16b pass m

22 C IAUC R *Tale of Mel beu* par 49-5 422a 424

23 HOB S *Leviathan* PART 93b 94d 95 PA T 124d 126a 140d 156b 157a

24 RA ELAIS *G gantua and Pant gru l* BK III 133b 134d

25 MONT GNE *E ay* 42a b

27 SHAKES EARE *K ng Le* ACT SC IV [6-36] 264c / *Coriolan s* A T S I [67] 351 353a

30 BAC N *Adva cement f Le rn g* 30 d 86b-c

31 S OZA *Eth s* ART V APP ND X XV I 448d

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35 LOCKE *C l Gover ment* CH V S 30-39 31 33 SECT 51 35d 36a

36 SWI T *G ll ver* RT V 154b 155b

38 M T SQU EU *Spir t of Laws* K V 19 d 23a b 29c K XII 86c d BK X I 96a b BK XVIII 128b K XX 146b-d K XXIII 199b 200a c

38 ROUSSEAU *I equ il ty* 348b 353b 354a 355b 60b 361a 365b 366 / *Political Econ omy* 375b d 377b 385a c / *Social Cont act* BK III 415b 417c

39 S I TH *Wealth of Nations* BK I 13a 16a 20b 23b 27b 37b esp 33c 52b 62a 106c 107a BK IV 225d 228a BK V 309 311c

40 GI ON *Decline and Fall* 22c

41 GIBBON *Decline and Fall* 86d 87c

42 KANT *S ence of Right* 424b-425 443b d 446a b

43 CONSTITUTION OF THE U S ARTICLE I S CT 2 [17-20] 11b SECT 9 [273 275] 13d ARTICLE VI [5,8-582] 16d AMENDM NTS V [645-648] 17b VII 17d XIV SECT I [748-750] 18 SECT 4 19a XVI 19b

43 FEDERALIST NUM R 73 218d 219b NUM ER 79 233 d

43 M LL *Liberty* 309a-c 322c d / *Repr sent tive Go ernment* 335a b 366c 367a / *Utilitarian ism* 467b 470a-471b p ssim 472d-473c

44 BOSW LL *Joh son* 124d 125c

46 H *Philosophy of Right* PART I par 49 24c 25a PART III par 236 76a c par 241 76d 77 ADD TIONS 29 121 145 140b 48 140c d / *Ph l phy of Hi t ry* PART IV 353b

48 M VILLE *Moby Dick* 292a 297a

50 MARX *Cap t l* 13a 50a passim 69a 84 c 89d 102b p ssim 112c 113 150a 151a 161b 162d 171a 256b-260c 261d 262a 264a 275c 280c 286 296c 298a 305c 307c 324a 327b 354b 366a 368a 376c 378d

50 MARX ENGELS *C mmunist Man f st* 423c d 425d 427b 429b c

51 TOLSTOY *War a d Pea* BK V 197b-c 211a 213a BK X 572d 573b K XV 633a d LOGUE I 650d 652a

52 DO TOEVSKY *Brothers Kar mazov* BK VI 165b 166a

54 FREUD *C tilt t o a d Its Discontents* 787d 788a esp 787d 788b [fn 3]

10 Th precepts of charity with re pect to we lth

10e(1) Alm giving to the n edy nd the im po e shed

OLD T ST M NT *Exodus* 23 1 / *Levit cus* 19 9-10 23.22 25 35 37 / *Deuteron my* 15 7-11 24 19-2 26 13 / *Ruth* 2 / *Job* 29 12 7 3 16-23 / *Ps lms* 4 -3—(D) *Psalm* 4 .2 4 / *P erbs* 4 2 31 19 17 2 13 2 9 28 27 29 7 / *Ec l st* 11 2 / *Is iah* 58 1-12—(D) *Is s* 58 12 / *E ek l* 18 4 1—(D) *E ch el* 18 4 21

APO YPHA *T b t* 1 1-8 16-17 4 7-11 12 8 14 10-11—(D) OT *T bia* 1 1-8 9 4 7-1 12 8 1 14 1 / *Ec les sticus* 3 30 4 10 7 32 33 1 -6 14 3 7 22 29 2 7 3 35 2 4 24—(D) OT *Ec le si us* 3 33 4 1 1 7 36-37 14 3 7 18 9 1 2 0-7 6 35 4

(10e *The precepts of charity with respect to wealth* 10e(1) *Almsgiving to the needy and the impoverished*)

NEW TESTAMENT *Matthew* 5 42 6 1-4 10 8 40-42 19 16-22 / *Mark* 10 17-22 / *Luke* 3 11 6 30-38 11 41 12 33-34 14 12-14 18 18-25 esp 18 22 / *Acts* 10 1-4 11 27-30 20 35 / *I Corinthians* 13 3 / *II Corinthians* 8-9 / *Galatians* 2 10 / *I Timothy* 6 17-19
20 AQUINAS *Summa Theologica* PART II II Q 32 540a-550a
22 CHAUCER *Parson's Tale* par 91 547a
29 CERVANTES *Don Quixote* PART II 222b
33 PASCAL *Provincial Letters* 91a-94a
38 MONTESQUIEU *Spirit of Laws* BK XXIII 199c
40 GIBBON *Decline and Fall* 198c-d 392d-393a
41 GIBBON *Decline and Fall* 233c
42 KANT *Science of Right* 443b-d
46 HEGEL *Philosophy of Right* PART III par 242 77a-b par 245 77c-d / *Philosophy of History* PART III 307b-308a PART IV 322b-c 353b-c

10e(2) The religious vow of poverty: voluntary poverty

NEW TESTAMENT *Matthew* 8 19-20 10 7-11 19 16-30 esp 19 21 19 27-30 / *Mark* 6 7-11 10 17-31 esp 10 21 10 28-31 / *Luke* 9 1-5 10 1-8 12 22-30 33 18 18-30 esp 18 22 18 28-30
20 AQUINAS *Summa Theologica* PART I-II Q 64 A 1 REP 3 66d-67c PART II-II Q 186 A 3 652d-655b AA 6-8 657-661a PART III SUPPL Q 89 A 2 1006b-1007c
21 DANTE *Divine Comedy* PURGATORY XX [16-33] 83b-c PARADISE XI 122a-123c
24 RABELAIS *Gargantua and Pantagruel* BK I 61b
29 CERVANTES *Don Quixote* PART II 338b
30 BACON *Advancement of Learning* 7d
40 GIBBON *Decline and Fall* 597a
46 HEGEL *Philosophy of History* PART III 307b-308a PART IV 333c 340d-341a
51 TOLSTOY *War and Peace* BK I 50b
52 DOSTOEVSKY *Brothers Karamazov* BK IV 85b-86b BK VI 164d-165a

10e(3) The choice between God and Mammon: the love of money as the root of all evil

OLD TESTAMENT *Exodus* 23 8 / *Deuteronomy* 16 19 17 15-17 / *Job* 31 24-28 / *Psalms* 52 7—(D) *Psalms* 51 9 / *Proverbs* 17 23 28 20 30 8-9 / *Jeremiah* 6 13 8 10—(D) *Jeremias* 6 13 8 10 / *Ezekiel* 22 25-29 33 30-31—(D) *Ezechiel* 22 25-29 33 30-31 / *Micah* 3 9-11 7 2-3—(D) *Micheas* 3 9-11 7 2-3
APOCRYPHA *Ecclesiasticus* 8 2 10 9 11 10 24-26 14 1-10 20 29 27 1-2 31 5-11—(D) OT *Ecclesiasticus* 8 2-3 10 9-10 11 10 26-28 14 1-10 20 31 27 1-2 31 5-11

NEW TESTAMENT *Matthew* 6 19-24 13 8-23 16 26 19 16-30 / *Mark* 4 1-20 8 36 10 17-30 / *Luke* 8 5-15 9 25 12 13-21 16 1-13 18 22-30 / *I Corinthians* 6 10 / *Ephesians* 5 5 / *I Timothy* 6 6-12 esp 6 10
5 SOPHOCLES *Antigone* [289-301] 133d
7 PLATO *Laws* BK VIII 733b-d
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33 PASCAL *Provincial Letters* 94a-97a
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11 Economic determinism: the economic interpretation of history

50 MARX *Capital* 7c 10b-11d 25c-d 35b-36c esp 36c-d [fn 2] 86d [fn 4] 181d [fn 3] 187a-c 239b-241a 377c-378d esp 378c-d
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The issue concerning usury *see* JUSTICE 8d

Other comparisons of the capitalist economy with the slave the feudal and the socialist economies *see* LABOR 5a–5d

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The consideration of economics as a science *see* PHILOSOPHY 2c SCIENCE 3a

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The consideration of the problems of economic justice *see* JUSTICE 8–8d

The discussion of the virtue of charity and the things which flow from charity *see* LOVE 5b–5b(2) VIRTUE AND VICE 8g

Another statement of the economic theory of history *see* HISTORY 4a(2) and for the examination of economic progress *see* PROGRESS 3a–3c

ADDITIONAL READINGS

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I Works by authors represented in this collection

II Works by authors not represented in this collection

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Chapter 100 WILL

INTRODUCTION

THE great controversy over the freedom of the will tends to overshadow the theory of the will itself For some thinkers the two notions are inseparable As the word choice popularly connotes freedom in choosing between alternatives so for them liberty belongs to the very nature of the will But others who affirm that men can act freely or voluntarily also deny that the will itself is ever free

Still others who distinguish between voluntary and reflex act ons—on the part of brute animals as well as men—also distinguish between the voluntary and the free They reserve freedom to men alone on the ground that men alone have wills Far from identifying will with free will they differentiate between those acts of the will which are necessitated and those which are free

It would appear from this sampling of conflicting opinions that the issue concerning free will presupposes and often conceals diverse theories of the will—different conceptions of its nature its various acts and its relation to other faculties Those who affirm and those who deny the will s freedom of action hardly meet on that issue if they proceed from different concept ons of what the will is and how it operates

The matter is further complicated by different conceptions of freedom Even those who define will in somewhat similar terms conceive its liberty d fferently As the chapter on LIBERTY ind cates freedom has many meanings—theolog cal metaphysical psychological moral natural and civil What is called free in one of these senses may not be so regarded in another But one thing is clear If as Hobbes thinks the only sense in wh ch freedom can be affirmed is that of natural or political liberty—the sense in which a man can *do* what he *wills* without restraint or compulsion—then the will is not free for its *freedom depends* on ho v its own acts are caused or how it causes other acts not on how the acts it causes are affected by outward circumstances beyond its control

The problem of the freedom of the will seems therefore to be primarily psychological and metaphysical It requires us to consider freedom in terms of *cause* and *necessity* It appeals to such distinctions as that between the caused the uncaused and the self caused or to the difference between the predetermined the contingent and the spontaneous event To this extent the problem is metaphysical But it is psychological insofar as the kind of event with which we are concerned is an interior act of a living thing and even more specifically of an intelligent being a being which has *mind* in some sense of that term We do not ask whether stones and *vegetables have free will because* we do not usually suppose that they have will Even those who like Aristotle attribute *desire* to all things or who like William James find a striving toward goals in at least all living things do not refer to volit on or the voluntary in the absence of imagination or thought

The italicized words in the foregoing paragraph indicate ideas which have the most fundamental bearing on the discussion of will and hence the relation of this to other chapters The chapters on CAUSE and NECESSITY (and those on FATE and CHANCE) deal with doctrines which both affect and are affected by various theories of the will s freedom. But if we are to postpone the question of f ee will *until the nature* of *will* itself is cons dered we must begin with definitions which employ terms discussed in the chapters on MIND and DESIRE

THE DISTINCTION BETWEEN thought and action sets the stage for the discovery of a factor or faculty which serves to connect them Acting may follow upon thinking but not wi[illegible]

intervention of a determination or a desire to translate thought into deed Plato in the *Republic* divides the soul into three parts of which one reason is the faculty of thought and knowledge and the other two spirit and appetite are principles of action Both spirit and appetite need to be guided and ruled by reason but according to Plato reason depends also upon spirit for without its support even wisdom must fail to influence conduct Though he does not use the word the role he assigns to spirit as the auxiliary of reason corresponds to the function performed by what later writers call will

The word will appears in the English translation of Aristotle It is used less frequently than other words—such as wish choice purpose impulse appetite desire —to designate a motivating force but along with them it signifies the factor which turns thought into action Unlike Plato who separates spirit and appetite Aristotle makes appetite the generic notion and treats will and desire as modes of appetite But sometimes desire is used as a synonym for appetite and sometimes wish or choice is substituted for will

In his treatise *On the Motion of Animals* we find Aristotle saying that the living creature is moved by intellect purpose wish and appetite All these are reducible to mind and desire For both imagination and sensation have this much in common with mind that all three are faculties of judgment However will impulse and appetite are all three forms of desire while purpose belongs both to intellect and to desire But in the treatise *On the Soul* we find him insisting that appetite be considered as the single faculty of originating local movement though if the soul were to be divided into a rational and an irrational part he would assign wish to the calculative or deliberative reason desire and passion to the irrational part Wish he writes is a form of appetite and when movement is produced according to calculation it is also according to wish but appetite can originate movement contrary to calculation for desire is also a form of appetite

What is said of purpose and wish is also said of choice All three somehow combine reason and desire Giving choice as the cause of specifically human action and desire combined with deliberation as the origin of choice Aristotle speaks of choice as either desiderative reason or ratiocinative desire Lacking reason animals do not have choice according to Aristotle or for that matter wish or purpose either but insofar as their appetites are stirred by sensation or imagination and the desires aroused lead to action animals behave voluntarily

When the words desire and appetite are so used not to name the generic faculty of originating movement but to signify a motivation different in kind from wish purpose or choice they correspond to what Aquinas later calls animal appetite or sensitive desire This is for him the sphere of the emotions or passions He treats the impulses of fear and anger for example as acts of the sensitive appetite

The kind of desire which for Aristotle depends upon practical reason Aquinas calls intellectual appetite or rational desire Since will is for him just another name for the desire or appetite which is determined by reason rather than sense he necessarily holds that irrational animals do not have will

Aristotle says that the apparent good is the object of appetite and the real good is the primary object of rational wish Aquinas distinguishes somewhat differently between the object of the passions and the object of the will For each sort of appetite or desire the object takes its special character from the faculty by which it is apprehended The sensible good perceived or imagined stands to the sensitive appetite as the intelligible good judged by reason stands to the intellectual appetite or will

In one place Aristotle differentiates between wish and choice by saying that we can wish for the impossible whereas choice is always of things within our power But his more usual distinction is in terms of means and end The end is what we wish for he writes the means what we deliberate about and choose Aquinas also divides the acts of the will according as they concern means or ends but where Aristotle mentions only choice and wish Aquinas enumerates three acts of the will with respect to ends (volition intention and enjoyment) and three with respect to means (consent choice and use)

According to Aquinas each of thes acts of the

will responds to a distinct act of the practical r ason and except for the will s last acts each may in turn be followed by further practical thou ht This progressive determination of the will by reason goes on until the *use* of means leads to action and action leads to the enjoy ment of the end accomplished As in practical reasoning ends come before means so for the will the end comes first in the order of inten tion but in the order of execution action begins with the means

LIKE ARISTOTLE AND Aquinas Kant and Hegel conceive will as a faculty of desire or activity founded upon reason and so they attribute will as they attribute reason to man alone But both Kant and Hegel go further and almost identify will in its pure state with reason

The faculty of desire writes Kant in so far as its inner principle of determination as the ground of its liking or predilection lies in the reason of the subject constitutes the will and he goes on to say that the will in so far as it may determine the voluntary act of choice is the practical reason itself Only man can claim possession of a will which takes no ac count of desires and inclinations and on the contrary conceives action as possible to him nay even necessary which can only be done by disregarding all desires and sensible inclina tions

In this last statement Kant seems to use the word desire in a sense which is opposed to will The context indicates that he has in mind something like the distinction made by Aqui nas between sensitive and rational desire This indication is confirmed by his own distinction between brute and human choice That act which is determinable only by inclination as a sensuous impulse or stimulus would be irration al brute cho ce (*arbitrium brutum*) The human act of choice however as human though in fact *aff ct d* by such impulses or stimuli is not *determ ned* by them and it s therefore not pure in itself when taken apart from the ac quired habit of determin tion by reason But according to Kant the human act of choice can be determined solely by reason Only then is it determined to action by the pure w ll

One point must be observed to which we shall subsequently return The pure will is for Kant a free will The act of choice that is determined by pure reason he writes is the act of free will The freedom of the act of volitional choice is its independence of being determined by sensuous impulses or stimuli This forms the negative conception of the free will The positive conception of freedom is given by the fact that the will is the capability of pure reason to be practical of itself Insofar as pure reason is able to become practical that is to determine choices and direct action independ ently of all sensuous impulses or inclinations that reason is in itself the pure will and that will is in its very essence free

For Hegel also freedom is of the essence of will Freedom he writes is just as funda mental a character of the will as weight is of bodies Heaviness constitutes the body and is the body The same is the case with freedom and will since the free entity is the will Will without freedom is an empty word while free dom is actual only as will as subject

Though the passions enter into the sphere of the subjective will according to Hegel will transforms them Subjective volition—Passion —is that which sets men in activity that which effects practical realization When it is occu pied with the passions the subjective will He gel writes is dependent and can gratify its de s res only within the limits of this dependence. The passions however are common to both men and animals An animal too has impulses desires inclinations Hegel says but it has no will and must obey its impulses if nothing external deters it Only man the wholly un determined stands above his impulses and may make them his own put them into himself as his own An impulse is something natural but to put it into my ego depend on my will

Hegel explains this aspect of the will by ref erence to that element of pure indeterminacy or that pure reflection of the ego into itself which involves the d ssipation of every restric tion and every content either immediately pre sented by nature, by needs desires and im pulses or given and determined by any means whatever But indeterminacy is only one mo ment of the will its negative aspect The second moment occurs in the transition from undif ferentiated indeterminacy to the differentia tion determination and positing of a deter

minacy as a content and object Both of these moments are partial each the negation of the other The indeterminate will in Hegel s opinion is just as one sided as the will rooted in sheer determinacy What is properly called the will includes in itself both the preceding moments

As the unity of both these moments the will is particularity reflected into itself and so brought back to universality *i e* it is individuality It is Hegel continues the *self* determination of the ego which means that at one and the same time the ego posits itself as its own negative *i e* as restricted and determinate and yet remains by itself *i e* in its self identity and universality While the two previous moments of the will are through and through abstract and one sided the third moment gives us the individual will and freedom in the concrete Freedom lies neither in indeterminacy nor in determinacy it is both of these at once Freedom is to will something determinate yet in this determinacy to be by oneself and to revert once more to the universal

In the tradition of the great books other writers place the essence of the will not in its freedom but in its being the cause of the voluntary acts performed by animals and men The students of physiology from Aristotle to William James distinguish the movements of the various bodily organs—the heart the lungs the organs of digestion excretion and reproduction—from those movements of the whole animal or of its members which are somehow based upon desire and imagination or thought

Aristotle sometimes calls these physiological changes non voluntary and sometimes involuntary though he has another meaning for involuntary when he describes the conduct of a man compelled by fear to do something contrary to his wishes *e g* the captain who throws his cargo overboard to save his ship The completely non voluntary motion is one which occurs quite apart from any *knowledge* of the end or without conscious desire whereas the involuntary involves some conflict of desires When the involuntary in this special sense is not considered only a twofold division is made as in James distinction between reflex and voluntary movements Harvey s distinction between natural and animal motions or Hobbes distinction between vital and animal motions.

There be in animals Hobbes writes two sorts of motions peculiar to them one called vital such as are the course of the blood the pulse the breathing the concoction nutrition excretion etc to which motions there needs no help of imagination The other is *animal motion* otherwise called *voluntary motion* as to go to speak to move any of our limbs in such manner as is first fancied in our minds Because going speaking and the like voluntary motions depend always upon a precedent thought of *whither which way* and *what* it is evident that the imagination is the first internal beginning of all voluntary motion

But the imagination according to Hobbes gives rise to voluntary motions through arousing desire or appetite When desires and aversions hopes and fears alternately succeed one another what Hobbes means by deliberation takes place and he declares in deliberation the last appetite or aversion immediately adhering to the action or to the omission thereof is that which we call Will the act (not the faculty) of willing And beasts that have deliberation must necessarily also have will The definition of the will given commonly by the Schools that it is a *rational appetite* is not good For if it were then could there be no voluntary act against reason For a voluntary act is that which proceedeth from the will and no other

Locke disagrees with Hobbes view that willing is an act of desire That the will is perfectly distinguished from desire he thinks may be seen in the fact that desire may have a quite contrary tendency from that which our wills set us upon Desire according to Locke is an uneasiness of the mind for want of some absent good whereas will is the power to begin or forbear continue or end the several actions of our minds and motions of our bodies barely by a thought or preference of the mind ordering or as it were commanding the doing or not doing such or such a particular action The actual exercise of that power by directing any particular action or its forbearance is that which we call volition or willing

Though volition is not an act of desire Locke holds that it is the uneasiness of desire which

determines the will to the successive voluntary actions And though Locke speaks of willing as if it were an act of thought he distinguishes between the mind s power of understanding and of willing The one is a passive the other is an active power Understanding or perceptivity is a power to receive ideas or thoughts will or motivity is the power to direct the operative faculties to motion or rest

In this conception of the will as the po er the mind has to control the faculties or the motions of the body which can be voluntarily exercised Locke like Hobbes before him and William James after explains the will s action in terms of thinking of the motion to be performed or the deed to be done Discussing the theory of what he calls ideo motor action James says that a supply of ideas of the various movements that are possible left in the memory by experiences of their involuntary performance, is thus the first prerequisite of the voluntary life Reflexive or other innately determined movements do not depend upon consciousness of the movement to be performed That is why voluntary movement must be secondary not primary functions of our organism or as he says in another place the action which is performed voluntarily must before that at least once have been impulsive or reflex.

The kind of idea which initiates a voluntary movement James calls a kinaesthetic image —an image of the sensations which will be experienced when the movement takes place "In perfectly simple voluntary acts he writes there is nothing else in the mind but the kinaesthetic image thus defined of what the act is to be In certain cases however there must be an additional mental antecedent in the shape of a fiat decision consent volitional mandate before the movement can follow Th s becomes necessary when contrary kinaesthetic images vie with one another to initiate antagonistic movements The express fiat or act of mental consent to the movement comes in when the neutralization of the antagonistic and inhibitory idea is required

With the prevalence once there as a fact of the motive idea James goes on the *psychology* of volition properly stops The movements which ensue are exclusively phys olo_ical phenomena following according to physiological laws upon neural events to which the idea corresponds The *willing* terminates with the prevalence of the idea We thus find that we reach the heart of our inquiry into volition when we ask by what process it is that the thought of any given object comes to prevail stably in the mind The answer James gives is that it is the essential achievement of the will to attend to a difficult object and hold it fast before the mind The so-doing *is* the *fiat* Effort of attention is thus the essential phenomenon of the will

Though Freud does not use the word will or analyze voluntary movements in ideo motor terms, he does attribute to what he calls the ego the function which Locke and James ascribe to will In popular language he writes we may say that the ego stands for reason and circumspection while the id stands for the untamed passions To the ego is given the task of representing the external world for the id and so of protecting it from destructive conflicts with reality

In d scharging this function on behalf of the id the ego controls the path of access to motility but Freud continues it interpolates between desire and action the procrastinating factor of thought during which it makes use of the residues of experience stored up in memory In this way it dethrones the pleasure principle which exerts undisputed sway over the processes in the id and substitutes for it the reality principle which promises greater security and greater success

AS THE PROBLEM OF the will s freedom involves the question of whether or how its acts are caused so the will s action raises a problem concerning how it causes the voluntary effects it produces In Locke s view we are equally at a loss to explain how one body moves another and how our own bodies are moved by our will The passing of motion out of one body into another he thinks is as obscure and inconceivable as how our minds move or stop our bodies by thought which we every moment find that they do

If we could explain this and make it intelligible Locke says in another place then the next step would be to understand creation

Hume agrees that it must forever escape our most diligent inquiry how the motion of our body follows upon the command of our will That it does he says is a matter of common experience like other natural events But the power and energy by which this is effected like that in other natural events is unknown and inconceivable

No less mysterious to Hume is the coming into existence of an idea consequent to the command of the will which seems to imply a creative power by which it raises from nothing a new idea and with a kind of *Fiat* imitates the omnipotence of its Maker How this operation is performed the power by which it is produced seems to him entirely beyond our comprehension

Spinoza and Descartes take a different view of the relation between the will and the intellect or understanding Neither admits that the human will forms new ideas or as Spinoza says that there are mere fancies constructed by the free power of the will Both conceive the will s activity as consisting in assent or dissent to ideas their affirmation or negation But beyond this point they part company

For one thing Descartes distinguishes between the will as a faculty of choice and the understanding as a faculty of knowledge whereas Spinoza holds that the will and the intellect are one and the same Since Spinoza denies that will and intellect are anything except the individual volitions and ideas themselves it is more precise he suggests to say that the individual volition (*i e* the affirmation or negation of *this* idea) and the individual idea affirmed or denied are one and the same

In consequence they differ with respect to the power of volition Spinoza criticizes the supposition he finds in Descartes that the will extends itself more widely than the intellect and is therefore different from it Whereas Descartes thinks that the faculty of comprehension which I possess is of very small extent and extremely limited Spinoza says I am conscious of a will so extended as to be subject to no limits We can affirm or deny much more than we can know with certitude

This difference between Spinoza and Descartes reveals itself most strikingly in their conception of God s will According to Descartes the omnipotence of God lies in the supremacy of his will—in its absolute independence even with respect to the divine intellect It is self contradictory that the will of God should not have been from eternity indifferent to all that has come to pass or ever will occur Thus, to illustrate God did not will the three angles of a triangle to be equal to two right angles because he knew that they could not be otherwise On the contrary it is because he willed the three angles of a triangle to be necessarily equal to two right angles that this is true and cannot be otherwise Against Descartes voluntarism Spinoza declares it absurd to say that God could bring it about that it should not follow from the nature of a triangle that its three angles should be equal to two right angles

Such different conceptions of the will or of its power necessarily lead to opposite conclusions concerning free will—in man or God The human mind according to Spinoza cannot be the free cause of its own actions In each of its volitions as in each of its ideas it is determined by a cause The supposition of an infinite will in God does not exempt that will from the need to be determined in its acts nor can God on this account be said to act from freedom of will. Yet Spinoza also affirms that God alone is a free cause for God alone exists and acts from the necessity of his own nature Freedom does not reside in the will nor in the absence of necessity or causal determination but rather in self determination It does not consist in choice but in the absence of compulsion by causes which lie outside one s own nature Hence only an infinite being—a *causa sui* in Spinoza s sense—can be free

Descartes on the other hand places freedom in the will and identifies it with the power of choice The faculty of will he writes consists alone in our having the power of choosing to do a thing or choosing not to do it or rather it consists alone in the fact that in order to affirm or deny pursue or shun those things placed before us by the understanding we act so that we are unconscious that any outside force constrains us in so doing Descartes seems to conceive the will as cause of itself in its acts of choice But he does not attribute to the human will the autonomy Spinoza ascribes to God

The knowledge of the understanding he

writes, "should always precede the determination of the will and in another place he says that our will impels us neither to follow after nor to flee from anything except as our understanding represents it as good or evil

In order to be free Descartes explains it is not necessary that I should be indifferent as to the choice of one or the other of two contraries but contrariwise the more I lean to the one—whether I recognize clearly that the reasons of the good and the true are to be found in it or whether God so disposes my inward thought—the more freely do I choose and embrace it The will always retains the power of directing itself towards one side or the other apart from any determination by the understanding The human will is in this sense always undetermined from without though it is not always indifferent to the alternatives confronting it It is indifferent Descartes holds only when a man does not know what is the more true or the better or at least when he does not see clearly enough to prevent him from doubting about it Thus the indifference which attaches to human liberty is very different from that which belongs to the divine

THE DENIAL OF FREE WILL in the tradition of western thought seems to follow from the principle that every happening must have a cause In the sphere of human conduct voluntary acts are no less determined effects of prior causes than involuntary acts Though both are equally necessitated the difference between the voluntary and the involuntary according to Hobbes Locke and Hume consists in the fact that when a man acts voluntarily he does what he himself has decided to do

The fact that his decision to act in a certain way is itself caused does not in the opinion of these writers abolish the freedom of his action but only the freedom of his will If freedom is attributed not to a man s will but to the man who can do what he wills then these writers think there is no conflict between freedom and necessity—or between freedom and the universal reign of causality For them freedom is abridged only by external forces which coerce a man to act contrary to his wishes or constrain him from acting as he wills Freedom in this sense is incompatible only with exterior compulsion not with the inner causal determination of every act of the will

To those who deny free will it does not seem to be an entirely satisfactory answer to say as Descartes does that we are immediately conscious of our freedom of choice In the Third Set of Objections urged by Thomas Hobbes against Descartes Objection XII (which is directed against Meditation IV wherein Descartes discusses free will) contains this statement We must note here also that the freedom of the will has been assumed without proof and in opposition to the opinion of the Calvinists In replying Descartes merely repeats his original statement of the evidence for free will

I made no assumption concerning freedom he writes which is not a matter of universal experience Though there are many who looking to the divine foreordination cannot conceive how that is compatible with liberty on our part nevertheless no one when he considers himself alone fails to experience that to will and to be free are the same thing (or rather that there is no difference between what is voluntary and what is free) To Gassendi who in another set of objections also denies the indeterminateness of the will Descartes replies 'These matters are such that anyone ought to experience them in himself rather than be convinced of them by ratiocination Refuse then to be free if freedom does not please you I at least shall rejoice in my liberty since I experience it in myself and you have assailed it not with proof but with bare negations merely

The experience of free will is no proof either the opponents reply for the experience is open to the suspicion that it is illusory rather than real It may be Hume suggest only a false sensation or seeming experience which we have of liberty or indifference in many of our actions We suffer this illusion even foist it upon ourselves he further suggests because we are motivated by the fantastical desire of shewing liberty In the same vein Freud later discounts objections to the determinism of psychoanalysis on the part of those who refuse to recognize the hidden causes which control their actions You have an illusion of a psychic freedom within you which you do not want to give up he says But this deeply rooted belief in psychic freedom and choice must be given up

because it is quite unscientific It must give way before the claims of a determinism which governs even mental life

THE DILEMMA OF FREE WILL or determinism does not seem to other writers to be so easily resolvable All theory is against the freedom of the will says Dr Johnson all experience for it Tolstoy states the dilemma in similar terms Regarding man as a subject of observa tion by the rational methods of the sciences Tolstoy writes we find a general law of neces sity to which he (like all that exists) is subject But regarding him from within ourselves as what we are conscious of we feel ourselves to be free This consciousnes is a source of self cogni tion quite apart from and independent of rea son Through his reason man observes himself but only through consciousness does he know himself You say I am not free But I have lifted my hand and let it fall Everyone under stands that this illogical reply is an irrefutable demonstration of freedom That reply is the expression of a consciousness that is not subject to reason

The problem cannot be solved Tolstoy thinks by ignoring one side of the question To do that is to put the problem on a level on which the question itself cannot exist In our time Tol stoy continues the majority of so called ad vanced people—that is the crowd of ignora muses—have taken the work of the naturalists who deal with one side of the question for a solution of the whole problem But to admit that from the point of view of reason man is subject to the law of necessity does not ad vance by a hair s breadth the solution of the question which has another opposite side based on the consciousness of freedom Not only does this unshakable irrefutable con sciousness of freedom uncontrolled by experi ment or argument constitute for Tolstoy the other side of the question but it is also for him that ithout which no conception of man is possible

William James takes a somewhat different view of the dilemma of free will or determinism Conceiving the act of free will in terms of the exertion of an effort on our part which is not determined by its object James is willing to a l mit that our consciousness of freedom may be a delusion Even in effortless volition we have the consciousness of the alternative being also possible This is surely a delusion here he writes why is it not a delusion everywhere? Hence it seems to him that the question of free will is insoluble on strictly psychological grounds

But if the existence of free will cannot be proved from experience neither in his opinion can determinism be scientifically demonstrated The most that any argument can do for deter minism he says is to make it a clear and se ductive conception which a man is foolish not to espouse so long as he stands by the reat scientific postulate that the world must be one unbroken fact and that prediction of all things without exception must be ideally if not ac tually possible For those who accept this postulate a little fact like effort can form no real exception to the overwhelming reign of deterministic law

Yet it remains a postulate and postulation is not proof Furthermore there is a *moral* pos tulate about the Universe which would lead one to espouse the contrary view the pos tulate that *what ought to be can be and that bad acts cannot be fated but that good ones must be possible in their place* As scientific law and pre diction seem to call for the postulate of deter minism so moral responsibility and the genuine ness of moral options seem to demand free will

Hume recognizes that it may be said that if voluntary actions be subjected to the same laws of necessity with the operations of matter there is a continued chain of necessary causes pre ordained and pre determined reaching from the original cause of all to every single volition of every human creature But he does not think that the assertion of no con tingency anywhere in the universe no indif ference no liberty requires us to give up our notions of moral responsibility and to abstain from making judgments of praise or blame con cerning human actions The mind of man is so formed by nature he writes that upon the appearance of certain characters dispositions, and actions it immediately feels the sentiment of approbation or blame The characters which engage our approbation are chiefly such as con tribute to the peace and security of human so ciety as the characters which excite blame are

chiefly such as tend to public detriment and disturbance

In Hume s opinion remote and uncertain speculations concerning the causation of human character or conduct or concerning the general structure of the universe do not affect the sentiments which arise from the natural and immediate view of the objects Why sh uld not the acknowledgement of a real distinction between vice and virtue he asks be reconcileable to all speculative systems of philosophy as well as that of a real distinction between personal beauty and deformity? James takes the exa tly opposite view A doctrine of necessity or determinism is for him incompatible with moral responsibility or with the dis t nction between virtue and vice Holding that free will is indispensable to the moral life James chooses the alternative of freedom In doing so he confesses that the grounds of his opinion are ethical rather than psychological

He does go one step further into what he calls the lo ic of the question Since postulation is not proof—since a postulate is not an undeniable axiom but an expression of what James elsewhere calls the will to bel eve —the kind of dilemma whi h is formed by conflicting postulates can be resolved only by the exercise of free choice The alternatives of free will and determinism constitute that kind of dilemma for James and so it seems to him quite proper that the first act of free will should be to believe in free will.

When scientific and moral postulates var thus with each other he writes and objective proof is not to be had the only course is voluntary choice for skepticism itself if systematic s also voluntary choice Hence belief in free will should be voluntarily chos n from amon st other possible bel efs F eedom s fi st deed *should be to affirm itself We ought never* to hope for any other method of getting at the truth if indetermin sm be a fact Doubt of this particular truth will therefore probably be open to us to the end of time and the utmost that a believer in free will can *ever* do will be to show that the deterministic arguments are not coercive That they are seductive James concludes I am the last to deny nor do I deny that effort may be needed to keep the faith in freedom when they press upon it upright n the mind

IN THE TRADITION OF THE great books not all who affirm free will think that to do so requires them to deny the universal reign of causality in nature nor do they base their affirmation on our immediate consciousness of free choice or make it an act of faith—a pragmatic postulate Kant for example explicitly disclaims that freedom is a matter of faith It is the only one of all the ideas of pure reason he says whose object is a matter of fact This means for him that its objective reality can be proved In contrast the existence of God and the immortality of the soul are matters of faith by which Kant means that they must be postulated by the practical reason as conditions necessary for the conceivability of the *summum bonum* which the moral law command us to seek

In order to understand Kant s proof of freedom it is necessary to remember that he conceives the freedom of the will in terms of its autonomy and its autonomy in terms of the fact that the practical reason with which the pure will is identical legislates for itself in proclaiming and obeys only itself in upholding the moral law Autonomy of the will he writes is that property of it by which it is a law unto itself Now the idea of freedom is inseparably connected with the conception of *autonomy* and this again with the universal principle of morality The moral law Kant goes on expresses nothing else than the *autonomy* of the pure practical reason and this *self legislat on* of the pure and therefore practical reason is freedom in the positive sense

In say ng that a free will and a will subject to moral laws are one and the same Kant thinks that he may be suspected of circular reasoning in that he appears to make freedom a condition of morality and at the same time to infer freedom from the existence of the moral law *There is no qu stion that for him freedom* must be the foundat on of all moral laws and the consequent responsibility But he explains no inconsistency results from calling freedom the condition of the moral law and al o maintaining that the moral law is the condit on under which we can first *become conscious* of freedom if it be understood that freedom is the *ratio essend* [ground of being] of the moral law wh le the moral law is the *rat o cognoscendi* [ground of knowing]

We know that our will is free from knowing the existence of the moral law We know that the moral law exists for otherwise reason could never judge as it does that we ought to have done what we did not do It is not freedom but the moral law of which we become directly conscious (as soon as we trace for ourselves maxims of the will) This Kant says first presents itself to us and leads directly to the concept of freedom Whenever a man judges that he can do a certain thing because he is conscious that he ought then according to Kant he recognizes that he is free a fact which but for the moral law he would never have known

The freedom which Kant thinks can be directly deduced from the moral law is a very special kind of causality In the sensible world of nature each cause is in turn the effect of some prior cause None is the first or unconditioned cause an uncaused cause But for Kant freedom is a faculty of absolute spontaneity and consists in the unconditioned causality of the cause a causality capable of producing effects independently of and even in opposition to the power of natural causes and capable consequently of *spontaneously* originating a series of events

How are these two modes of causality—which Kant calls the causality of *nature* and of *freedom* —compatible with one another? To affirm both would appear to get us into the antinomy in which the thesis that causality according to the laws of nature is not the only causality a causality of freedom is also necessary is contradicted by the antithesis that there is no such thing as freedom but everything in the world happens solely according to the laws of nature Yet Kant thinks he can show that this antinomy is based upon a mere illusion and that nature and freedom are at least *not opposed*

It would be impossible he admits to escape this contradiction if the thinking subject which seems to itself free conceived itself in *the same sense* or in *the very same relation* when it calls itself free as when in respect to the same action it assumes itself to be subject to the laws of nature But the contradiction is only apparent or illusory if man belongs to two worlds—the sensible world of natural phenomena and the supersensible world of intelligible beings or noumena The notion of a being that has free will writes Kant is the notion of a *causa noumenon* —of a cause which does not operate under the temporal conditions of natural causality The notion of causality as *physical necessity* concerns only the existence of things so far as it is determinable *in time* and consequently as phenomena in opposition to their causality as things in themselves

To remove the apparent contradiction between freedom and the mechanism of nature in one and the same action we must remember that the necessity of nature which cannot coexist with the freedom of the subject appertains only to the attributes of the thing that is subject to time conditions consequently only to those of the acting subject as a phenomenon

But the very same subject Kant continues being on the other side conscious of himself as a thing in himself considers his existence also *in so far as it is not subject to time condition* and regards himself as only determinable by laws which he gives himself through reason

In the latter mode of supersensible existence man exercises the causality of a free will He is not in any way subject to the natural necessity which governs all physical things Yet the two worlds—the moral world of freedom and the physical world of necessity—meet in the same act The rational being Kant explains can justly say of every unlawful action that he performs that he could very well have left it undone although as appearance it is sufficiently determined in the past and in this respect is absolutely necessary

The apparent conflict between freedom and nature arises for Kant because he conceives the act of free will to be absolutely spontaneous It is as uncaused as the swerve of the atoms (discussed in the chapter on Chance) on which Lucretius bases the existence of free will There is another conception of freedom that does not attribute to free will any special character which brings it into conflict with ordinary causality It does not belong to liberty Aquinas thinks that what is free should be the first cause of itself Not only is God the ultimate cause of what a man freely chooses to do as He is the first cause of every natural event but the will as a natural faculty of man never moves itself to

operation It is always moved by the reason even in its acts of choice and so these acts wherein the will is free are also caused

Where Kant identifies will with free will (which implies that the will is free in all its acts) Aquinas distinguishes between those acts of the will which are necessitated and those which are free He quotes Augustine to the effect that natural necessity does not take away the liberty of the will for that liberty exists only in the will s choice of means not in its volition of the end Just as the intellect naturally and of necessity adheres to first principles Aquinas explains so the will adheres to the last end And just as the intellect assents of necessity to those propositions which have a necessary connection with first principles namely demonstrable conclusions so the will adheres of necessity only to those things which have a necessary connection with happiness With regard to all else—the whole realm of particular goods which are merely contingent means—the will is not necessitated and so its choice among them is free

Although Aquinas says that unless man has free choice counsels exhortations commands prohibitions rewards and punishments would be in vain he does not postulate free will as an indispensable condition of moral conduct Rather he shows how reason in causing the will s choices at the same time leaves them free The root of liberty he writes is the will as the subject thereof but it is the reason as its cause For the will can tend freely towards various objects precisely because the reason can have various perceptions of good When for example the deliberating reason is indifferently disposed to opposite things the will can be inclined to either The freedom of the will s choice with respect to particular means thus lies in the fact that with respect to all contingent matters the judgment of reason may follow opposite courses and is not determinate to one

In all particular goods Aquinas writes the reason can consider an aspect of some good and the lack of some good which has the aspect of evil and in this respect it can apprehend any single one of such goods as something to be chosen or to be avoided The perfect good alone which is happiness cannot be apprehended by reason as an evil or lacking in any way Consequently man wills happiness of necessity nor can he will not to be happy or to be unhappy Now since choice is not of the end but of the means it is not of the perfect good which is happiness but of particular goods Therefore man chooses not of necessity but freely

Like Aquinas Locke holds that to be determined by our own judgment is no restraint to liberty But where Locke thinks the constant determination to a pursuit of happiness no abridgment of liberty Aquinas holds that because man wills happiness of necessity his will is not free in the volition of its natural end Yet Locke does mention the case wherein a man is at liberty in respect of willing —the case in which a man may suspend the act of his choice from being determined for or against the thing proposed till he has examined whether it be really of a nature in itself and consequences to make him happy or not

In this type of case Aquinas locates what is peculiar to the causality of freedom Sometimes the judgment of reason is determined by its object as when it contemplates the final end of actions But when it deliberates about alternative means (which are both particular and contingent) reason can judge either way What determines it to judge this way rather than that? Aquinas answer is that such judgments of the reason are voluntary in contrast to reason s involuntary assent to self evident truths wherein it is determined entirely by the object being considered But if a voluntary judgment is one in which the will determines the reason s assent and if reason s judgments concerning means are voluntary in this sense then the act of the reason which causes the will s act of choice is itself an act caused by the will The will s choice is therefore not uncaused but as Aquinas conceives it the way in which it is caused makes it self determining and to this extent free

THE GENERAL THEORY OF the will figures most prominently in the theology of Aquinas and in the philosophy of Kant and Hegel They not only present the most elaborate analyses of its nature and its relation to reason but in the tradition of the great books they are the most stalwart defenders of its freedom Their differ

ences in principle and in reasoning may how ever obscure the common ground they share

This may be seen in their conception of free dom Aquinas does not attribute autonomy or spontaneity to the will Yet in his view of free choice as a self determining act of the will there is something analogous to Kant s autonomy and where Kant makes the pure will essentially free and spontaneous Aquinas holds that the will with respect to willing or not willing is always free and inviolable It is absolutely with in the power of the will he writes not to act and not to will He does not try to explain such freedom of exercise in the same way as freedom of choice

It is only with regard to the latter that Aquinas appeals to the causal reciprocity be tween reason and will to show how the will s act of choice can be both free and caused The kind of causation which Aquinas thinks takes place in free choice—the will determining the reason to make the practical judgment by which it is itself determined—seems to involve a circularity or perhaps simultaneity in action and reaction If this is possible only because reason and will are *spiritual* powers then here too there is some likeness to Kant s theory of the will s action as belonging to the super sensible world rather than to the domain of physical movement

On one other point they tend to agree even more plainly Free choice writes Aquinas is part of man s dignity Man s dignity for Kant—his membership in what Kant calls the kingdom of ends —is rendered possible by the *freedom of the will* But though they share this opinion of the source of human dignity in rationality and freedom they do not draw the same moral consequences from their affirmation of free will as pivotal in human life

Aquinas like Aristotle does not find moral goodness only in the will On the contrary the rectitude of the will depends on the goodness of the end it adheres to and the means it chooses. But like the Stoics Kant makes the will the sole repository of moral goodness

As Epictetus says that all good and evil lie in man s will and that the morally neutral sphere is in the region outside the will s control so Kant begins his moral philosophy with the state ment Nothing can possibly be conceived in the world or even out of it which can be called good without qualification except a Good Will In his view a good will is good not because of what it performs or effects not by its aptness for the attainment of some proposed end but simply by virtue of the volition *that is it is* good in itself In another place he adds that though not indeed the sole and complete good the will *good in itself* must be the supreme good and the condition of every other even of *the desire of happiness*

These fundamental issues concerning the will in moral philosophy are more fully treated in the chapter on DUTY The problems of the will in political theory are considered in the chap ters on LAW and STATE—especially those prob lems which involve the concept of the sovereign will and the distinction of the particular will and the *general* will the majority will and the will of all The strictly theological problems concerning God s freedom and man s freedom in relation to God s will are also *reserved* for treatment elsewhere

OUTLINE OF TOPICS

REFERENCES

To find the passa es cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in **4** HO IER *Iliad* BK II [265 283] **12d** *the number* **4** *is the number of the volume in the set the number* **12d** *indicates that the pas sage is in section* **d** *of page* **12**

PAGE S CTIONS When the text is printed in ne column the letters **a** and **b** refer to the upper and lower halves of the pa e For e ample in **53** J S ES *Psychology* **116a 119b** the passage b gins in the upper half of page 116 and ends n the lo ver half of pa e 119 When th text is printed in t o colum s th letters **a** and **b** refer to the upp r and lo er halves of the left ha d side f the pa e the letters **c** and **d** to th upper and lower halves of the right ha d side of the p ge For example in **7** PLATO *Symposium* **163b 164c** the passage beg ns n the lower half of the left ha d s de of pa e 163 and end n th *upper half of the ri ht hand side of pa e 164*

AUTHOR DIVISIONS One or more of the main di is ns of a work (such as PART BK CH SE T) a e sometimes in lud d in the reference line numbers in brackets are given in cer tain cases *e g Ili d* BK II [6 83] **12d**

BI LE REF R NCES The references are to book chapter and vers When the K n James and Douay versions differ in title of books or in th numbering of chapters or verses the King James ver on is ited first and the Douay ind cated by a (*D*) follows *e g* OLD TESTA MENT *Nehem ah* 7 45—(*D*) *II Esdras* 7 46

SYM O S The bbreviation esp calls the reader s attention to one or m re especially *rele ant parts of a whole reference p im signifies that the topic is d scussed intermit* tently rath than continuously in the work or passage cited

For dd t onal inf mat n co c rning the style of the references see the Explan tion of Reference Style for ge ral gu d n e in the use of *The Great Ideas* consult the Preface.

1 The e istence and nature of w ll ts lat on to reason or m nd nd to de e o emo tion

7 PLATO *Republic* K IV **50b 353c**

8 ARIS OTLE *Met physics* K IX CH 5 [047b 35 1048 4] **573b c** / *Sou l* K II CH 7 [43 b 12] **664a b** CH 9 [432 22 b7] **664d-665** CH I [433a23 26] **666a**

9 A T TL *Mot f Animals* CH 6 [700 5-2] **235d 236a** / *Eth cs* BK VI CH 2 **387d 388b** / *Rh toric* K CH 10 [1368b33 1369 4] **612a b**

12 LUCRET US *Nature f Th gs* BK I [51 293] **18b d**

12 EPI TETUS *Di cou e* K II CH 0 **148c 149d 150a** H 3 **170a 172d**

17 P OTINU *Third Enn ad* TR H 4 **108c 109b** / *S xth Ennead* TR V **342d 353d**

18 AUG TINE *C fe ons* BK VIII par 9-24 **58b-60a** / *City of G d* BK IX C I 4-5 **287a 289** BK XIV H 6-9 **380b 385b**

19 AQU NA *Summ Theolog ca* PART I Q 14 A 8 A S **82c 83b** Q 9 A I AN and REP 2 **108d 109** A AN **109 110b** Q 54 A AN **285d 286c** Q 59 **306b-310a** Q 75 A 6 ANS **383 384c** Q 8 A **428a d** Q 8 **431d-436c** Q 83 AA 3 4 **438d-440b** Q 87 A 4 **468b d** PART I-II Q 6 A 2 REP I **646a-c** A 8 **650d 651c** Q 9 A 6 AN **662a d** Q 10 A I **662d 663d** Q 12 A I **669c 670b** Q 13 A I **672d 673c** A 5 R I **675c 676b** Q 17 A I **686d 687** Q 18 A 7 ANS **698c 699c** Q 19 AA 3-6 **704 708a** Q 24 A 2 ANS **727d 728** Q 26 A I ANS **734a d**

20 AQUINAS *Summa Th logica* PART I II Q 5 A 5 **10b d** Q 62 A 3 R I **61c-62b** Q 77 A I **145a d**

21 DAN *D ine Comedy* PURGA ORY XVII [91- 5] **79b-c** XVIII [1-75] **79d 80c** esp [64 75] **80c**

3 HO BES *Lev th an* PART I **61a-c 64a** PART I **165c** PART IV **272**

7 SHAK EA E *Tro lus nd C ida* ACT SC [-67] **114a b** [163 182] **115b c** ACT II C II [80-96] **121a** / *Othello* ACT I SC I I [322 337] **212b-c**

30 BACON *Ad ancement f Lea n* **55b d 66c d 67a b**

31 DESC RTE *Med t ti* I **82d 83a** IV **89a 93a** / *Obj ct o a d Replie* D F **130** AT OM VII **132a 141d 215d 216 228**

31 S NOZ *Ethi s* PART I PROP 31 **366d 367a** PART II AXIOM 3 **373d** RO 48 49 **391a 394d** P RT I I RO 9 S HOL **399c** THE AFF CTS DEF I XPL **416c-d**

(1 *The existence and nature of will its relation to reason or mind and to desire or emotion*)

35 LOCKE *Civil Government* CH VI SECT 57 63 36d 38c passim / *Human Understanding* BK II CH VI 131b c CH VII SECT 3 131d 132a CH XXI SECT 5 6 179c 180a SECT 15 181c SECT 29-48 184d 190d passim SECT 73 198c 199c CH XXIII SECT 18 209a SECT 28 211b d SECT 30 212a b BK IV CH XIII SECT 2 363d 364a

35 BERKELEY *Human Knowledge* SECT 26-28 418a c SECT 144 441d

35 HUME *Human Understanding* SECT VII DIV 51 53 472b-474b

38 ROUSSEAU *Inequality* 337d 338a

41 GIBBON *Decline and Fall* 150c

42 KANT *Pure Reason* 164a 165c esp 164b c 234c 236a esp 235c d 236d 237a / *Fund Prin Metaphysic of Morals* 256a d 264d 265a 271 d 279b 280b c 282d 283b 284d 285a / *Practical Reason* 303b 304b 314a d 315 329b c / *Pref Metaphysical Elements of Ethics* 367 / *Intro Metaphysic of Morals* 385a d 386b d / *Judgement* 483d-484b 508d [fn 1]

43 MILL *Utilitarianism* 463 464d

46 HEGEL *Philosophy of Right* INTRO par 4 12d 13a par 22 17c d par 25 26 18a c ADDITIONS 17 119a 26 121 b 90 130b d / *Philosophy of History* INTRO 163a 164a PART IV 362b d

53 JAMES *Psychology* 51a b 660b 661a 767a 814b 820b esp 814b 815a 816a 817b 819a

54 FREUD *Hysteria* 110c / *Interpretation of Dreams* 276c 351d 353a b / *Ego and Id* 702c d 715c d / *War and Death* 760d 761a / *New Introductory Lectures* 837b 838d esp 838b

2 The analysis of the power and acts of the will

2*a* The objects of the will the scope of its power

8 ARISTOTLE *Topics* BK VI CH 8 [146^{b}37 ^{b}6] 200b [146^{b}36- 147^{a}1] 200d 201a / *Metaphysics* BK XII CH 7 [1072^{a}23 ^{b}4] 602b c / *Soul* BK III CH 7 [431^{b}2 2] 664a b CH 10 [433^{a}13 31] 665d 666a [433^{b}5 18] 666b c

9 ARISTOTLE *Ethics* BK III CH 2 4 357b 359c BK VI CH 387d 388b

12 EPICTETUS *Discourses* BK III CH 24 203c 210a BK IV CH 213a 223d

17 PLOTINUS *Third Ennead* TR 1 8 81d 82b / *Fourth Ennead* TR IV CH 35 177d 178a

18 AUGUSTINE *Confessions* BK III par 19 24 58b 60a / *City of God* BK XI 8 346d 347b

19 AQUINAS *Summa Theologica* PART I Q 9 A 1 REP 1 3 108d 109c A 3 110b 111c Q 6 REP 1 2 113c 114d A 7 ANS 114d 115d A 9 ANS 116d 117d Q 10 A 1 ANS and REP 3 120a 121b Q 21 A 1 REP 2 124b 125b Q 54 A 2 ANS 285d 286c Q 59 A 1 ANS and REP 1 306c 307b A 2 307c 308b A 3 ANS 308b 309a A 4 ANS and REP 3 309a 310a Q 62 A 8 323c 324a Q 75 A 6 ANS 383c 384c Q 82 A 2 REP 1 2 432d 433c AA 4 5 434c 436c Q 87 A 4 REP 2 468b d Q 105 A 4 5 541c 542a PART I II QQ 1 5 609a 643d Q 6 A 4 REP 2 647b 648a Q 9 A 1 ANS and REP 3 657d 658d A 6 ANS and REP 3 662a d Q 10 A 1 ANS and REP 3 662d 663d A 2 663d 664d Q 13 A 2 ANS 673c 674c AA 3 5 674c 676b Q 18 6 697d 698c A 7 ANS 698c 699c Q 19 A 1 ANS and REP 1 3 703b d A REP 1 703d 704c A 3 704c 705a A 5 ANS 705d 707a Q 20 A 1 ANS and REP 1 2 712a d

21 DANTE *Divine Comedy* PURGATORY XVII [91] XVIII [75] 79b 80c

23 HOBBES *Leviathan* PART I 87c 93c PART III 165b c

27 SHAKESPEARE *Othello* ACT I SC III [322 337] 212b c

31 DESCARTES *Meditations* IV 89a 93a / *Objections and Replies* AXIO I VII 132a

31 SPINOZA *Ethics* PART III PROP 4 11 398d 400b esp PROP 9 SCHOL 399c PART IV PROP 19 429d PROP 63 443d 444a

33 PASCAL *Pensées* 81 186b

35 LOCKE *Human Understanding* BK II CH XXI SECT 5 179c SECT 15 181c SECT 41 188b c BK IV CH IX SECT 19 354 c

35 BERKELEY *Human Knowledge* SECT 26-29 418a c

35 HUME *Human Understanding* SECT VII DIV 51 53 472b 474b DIV 58 476a b

42 KANT *Fund Prin Metaphysic of Morals* 256a d 259a b / *Practical Reason* 298a 300a 304a 307d esp 304a d 315c 327a 329a 350c 351b / *Pref Metaphysical Elements of Ethics* 367c / *Science of Right* 397b 398a 403b 40 d / *Judgement* 584d 585c 605d 606b [fn 2]

43 MILL *Representative Government* 331b c / *Utilitarianism* 463c 464d

46 HEGEL *Philosophy of Right* PART I par 37 21d PART 41 22c d par 45 23c d PART II par 1 7 40b c par 109 111 41a c ADDITIONS 8 117c d 26 121a b 70 127b / *Philosophy of History* PART IV 319b 320a

53 JAMES *Psychology* 660b 661a 767a 768a 787a 814b 819a 830

54 FREUD *Hysteria* 110c / *Ego and Id* 715c 716a / *Civilization and Its Discontents* 800d 801a / *New Introductory Lectures* 838b 839b esp 838 d

2*b* The motivation of the will

8 ARISTOTLE *Soul* BK III CH 9 [432^{b}13]-CH 10 [433^{b}30] 665a 666d

9 ARISTOTLE *Ethics* BK III CH 2 4 357b 359c / *Rhetoric* BK I CH 10 [1368^{b}1 1369^{b}2] 611c 613a

17 PLOTINUS *Sixth E nead* TR VIII CH I 4 342d 344d
18 AUGUSTINE *C fe sions* BK VIII par 19 24 58b-60a / *C ty of G d* BK IX CH 4-5 287a 289 K XXII CH 2 587b d
19 AQ NAS *Summ Theologica* PART I Q 82 A 4 434c 435c PART I II Q 9 657d 662d Q 7 A 5 689c 690b
23 HOB S *Le atl an* PART I 64b-c
31 D SCARTES *Med tations* IV 90b 93a / *Ob j ctions nd Replies* 126a b DEF I 130a AX M VII 132a 228
31 S INOZ *Eth cs* PART III PROP 4 I 398d 400b PART V PROP 9-19 426d-429d PROP 63 443d 444a
35 LOCKE *Hum Underst di g* BK I C I VII SE T 3 131d 132a CH XX SECT 6 177a b CH XX S CT 29-57 184d 193c pas m ECT 73 198 199c
42 KANT *Pure Reason* 164a 165 236d 237a / / *Fund P Metaphy ic of M als* 259a c 262 c 264d 265b 279b d 287d esp 282b 283d 284d 285a / *Pr t al Re s* 298a 300 301a 304a d 315c 318c d 327a 329a 330 331 341c 342a / *Intro Metaphysic of Mor l* 385c 386b 389a 390a c / *Judgement* 571c 572 605d 606b [fn 2]
46 H E *Pl ilosophy f Right* INTRO par 25 26 18a P RT I par 35 21a b ADDIT ON 2 120 d / *Ph l ophy f Hi to y* NTRO 166b PART IV 362b d
49 DARW N *De cent f Man* 310 d 592b d
53 JAMES *Psy hol gy* 790 799b esp 792b 795b 798b 799b 807a 814b
54 FREU *Ge er l I trodu t* 592d 593a

2b(1) The rat onal d termin tion of the w ll s acts by judgm nts concern ng good nd ev l or by the moral l w

8 AR STOT E *T p cs* BK T CI 8 [146b36- 47 1] 200d 201a / *Met phy ic* BK XII CH 7 [1072 26 29] 602b / *S l* BK C I 7 [43 b] 664 b CH 9 [43 b13] H I [433b 8] 665a 666 CH I [433b 7 3] 666 d
9 A I T TL *M tion f An m l* c 6 [7 b15] -CH 7 [7 I 39] 235d 236d / *Eth s* K C I 357b 358a CH 3 [3 3]-CH 4 [13b1] 359 c BK VI H 2 387d 388b CH 13 394b d / *Rh toric* K CH I 611 613a pas im
12 LUC ETIU *N t e of Th gs* K V [877 891] 55d
14 P UT RCH *P les* 121b / *Tim leon* 197c 198
17 PLOTINUS *S th E e d* TR V CH I 4 342d 344d
19 AQU N *Summ Tl ol g a* ART I Q 6 A I RE 2 28b d Q 19 A 7 NS 114d 115d Q I A RE 2 124b 125b Q 7 A 3 R P 3 155 156a Q 59 A I REP 3 306 307b Q 82 A AN nd E 3 432d 433c A 3 R 2 433 -434c A 4 434c 435 Q 83 A 3 438d 439c A 4 REP 3 439c 440b Q 87 A 4 468b d P RT I II Q I A 6 REP 3 614a c Q 3 A 4 REP 3 4 625a 626b Q 8 A I ANS and REP 3 655b 656a Q 9 A I 657d 658d A 3 REP 3 659c 660a A 4 ANS 660a d A 6 REP 2 3 662a d Q I A I R P I 3 669c 670b A 5 ANS 672a c Q 13 A I 672d 673c A 3 ANS 674c-675a A 5 675c 676b Q 14 677b 681a Q 15 A 3 ANS 682 683b A 4 683b 684a Q 16 A I REP I 684b d Q 17 A 5 689c 690b Q 19 A 3 704c 705a A 5 ANS 705d 707a A 10 ANS and REP I 710b 711d Q 2 A I ANS and REP I 712a d
21 DANTE *D vine Comedy* HELL I [I] I [21] 1a 4b PURGATORY XVI [52-84] 77b-d XVIII [1-75] 79d 80c
27 SHAKESP ARE *Troilus and Cressida* ACT II SC II [51-6,] 114a b [163 182] 115b c
30 B CON *Ad cement of Learning* 66c d
31 DE CARTES *Rul I* 1d 2a / *Discourse* PART III 50b / *Meditat ons* IV 89a 93a / *Object s and Repl es* 125b c AXIO I VII 132a 141d 216b c 228c
31 S INOZA *Ethics* PART III PROP 9 SCHOL 399c PART V PROP 6 443a b PRO 63 443d 444a APP NDIX III 447b XXXI 450c d
35 LOCKE *Hum U derst di g* BK II H XXI ECT 33 186a S T 37 187a b SECT 48 49 190 191a
38 ROU EAU *I equal ty* 337d 338a
42 KANT *Pur Reason* 169 170a / *Fund Prin Metaphy c of M als* 264d 265b esp 265b 271 d 279b d 282d 283b / *Practical Reas n* 298a 300 306d 307a 318c 321b esp 319c d / *Pref M t physic l Elements f Ethics* 367c / *Scien f R ght* 397b 398a / *J dgem nt* 477b 571c 572a 605d 606b [fn]
46 H *Ph l phy of Right* PART I P T 139 48d-49b ADD TION 90-91 130b 131d
49 DAR IN *D scent f Man* 310d
53 JA *Psy l ology* 796a 798b 807 808a

2b(2) The ens t e determination of the w ll s acts by est m tions of benefit and harm or ple u e and p n the impuls on of the pass ons

8 ARI TOTL *S ul* K III CH [433 21 31] 665d 666a [433b5 13] 666b CH II [434 10 15] 666d 667a
9 A I OTLE *Eth* K I CH I [I I] H 2 [III b 9] 357a c H 4 359a-c K X CH I [7 8 7] 426a H 2 [7 b3, 1173 4] 427a / *Rh t c* BK I H 10 611 613 pass m
12 AUREL US *Med t t on* BK VII SECT 55 283b c
19 AQUIN S *Summ The logica* ART I Q 6 A 4 RE 3 647b 648a AA 6-7 649a 650d Q 9 A 2 658d 659 A 4 CONTR RY 660 d A 5 ANS nd RE 2 3 660d 662 Q I A 3 664d 665
20 AQUIN S *Summ Th log a* ART I-I Q 77 A I 145 d
21 D NT *Di ne Comedy* H LL I [I]-I [21]

3 (1) The d st nction between the voluntary and the in oluntary the conditions of volunt rin ss comparison of men and a imals w th espect to oluntary be ha or

3a(2) The range of purposive cond ct the rel tion of h bit nd nstinct to the voluntary

(3a *The role of the will in behavior* 3a(2) *The range of purposive conduct the relation of habit and instinct to the voluntary*)

51 TOLSTOY *War and Peace* EPILOGUE I 665a d
53 JAMES *Psychology* 8a 9a 71b [fn 1] 74b 78b esp 75b 77a b 80a 90b 93a esp 92a 93a 691a b 704a 706b esp 706a b 767b 768a 774a 788a 789a 790b 791a

3b The role of the will in thought

8 ARISTOTLE *Soul* BK II CH 5 [417^{a}21 ^{b}1] 647d 648a BK III CH 4 [420^{b}5–9] 661d / *Memory and Reminiscence* CH 2 [453 15– 1] 695b d
12 LUCRETIUS *Nature of Things* BK IV [777 817] 54b d
18 AUGUSTINE *Confessions* BK VIII par 0 21 58c 59a
19 AQUINAS *Summa Theologica* PART I II Q 6 A 7 REP 3 650a d Q 9 A 1 ANS and REP 3 657d 658d Q 10 A 2 ANS 663d 664d Q 11 A 1 REP 1 666b d 667a Q 13 A 4 REP 675a Q 14 A 1 REP 1 677b 678 Q 16 A 1 REP 3 684b d A 4 ANS 686a d Q 17 A 1 ANS 686d 687c Q 19 A 3 REP 3 704c 705a
31 DESCARTES *Meditations* III 83b c IV 89a 93a passim / *Objections and Replies* 125c 126b 167a b 215d 216
31 SPINOZA *Ethics* PART II PROP 49 D ON T– S HOL 391c 392
33 PASCAL *Pensées* 99 191a / *Geometrical Demonstration* 439b 441b
35 LOCKE *Human Understanding* BK II CH XX SECT 5 179c EC 1 180d 181a S CT 17 19 182a SE T 38 187c BK IV H X II 363c 364b H XX SECT 5 16 393a 394a
35 HUME *Human Understanding* ECT V I DIV 53 473c 474b
42 KANT *Pure Reason* 240b 243
46 HEGEL *Philosophy of Right* INTRO par 5–9 13a 14d pa 13 15c d
53 JAMES *Psychology* 381b 385b 666b 667a 818b 820b esp 820a

3b(1) The distinction between knowledge and opinion in relation to the willful in thought the will to believe and wishful thinking

12 LUCRETIUS *Nature of Things* BK IV [777 817] 54b d
19 AQUINAS *Summa Theologica* PART I Q 13 A 4 REP 2 675 C Q 7 6 ANS 690b d
20 AQUINAS *Summa Theologica* PART I II Q 67 A 3 ANS 83b 84d PART II II Q 2 A 391a 392a
24 RABELAIS *Gargantua and Pantagruel* K II 148a 150d 154a 156c 159d 163 166 171a 175c 178a
28 HARVEY *Motion of the Heart* 283b
30 BACON *Advancement of Learning* 27a c 38d 39a
31 DESCARTES *Objections and Replies* 125c 126b
31 SPINOZA *Ethics* PART I APPENDI 369b 372d
35 LOCKE *Human Understanding* BK IV CH XIII 363c 364b CH XX SECT 15 16 393a 394
42 KANT *Pure Reason* 240b 243c / *Judgement* 601d
43 MILL *Liberty* 269c 270c
51 TOLSTOY *War and Peace* BK XIII 585b
53 JAMES *Psychology* 636a b 644a b 652 659a passim esp 653a 654a 659b [fn 1] 660b 661b 820a b
54 FREUD *War and Death* 760d 761a / *New Introductory Lectures* 819b c 874c d 882a b

3b(2) The will as cause of error

31 DESCARTES *Meditations* IV 89a 93a esp 90b 91b / *Objections and Replies* 167a b 215d 216c
31 SPINOZA *Ethics* PART II PROP 49 SCHOL 392c 393c

3b(3) Religious faith as dependent on an act of will or practical reason

18 AUGUSTINE *Confessions* BK I par 1 1a b BK VI par 6–8 36c 37c BK VIII par 10–12 55 56b par 18 5 57d 60a par 28 29 60d 61a
20 AQUINAS *Summa Theologica* PART II II Q 2 A 1 REP 3 391a 392a AA 9 10 398c 400b Q 4 A 2 403d 404c
30 BACON *Advancement of Learning* 41b d
31 DESCARTES *Rules* III 4d 5a / *Objections and Replies* 125c 126b
33 PASCAL *Pensées* 52 219a 220a 268 2 222a 223b 84 223b 224a 287 224a b / *Geometrical Demonstration* 440a b
35 LOCKE *Toleration* 15b
40 GIBBON *Decline and Fall* 296b c
42 KANT *Judgement* 604d 606d esp 606a d 607c 610a esp 607c
46 HEGEL *Philosophy of History* PART IV 350a b
51 TOLSTOY *War and Peace* K 196 198b
53 JAMES *Psychology* 652b 653a 661b 826b 827a

4 The divine will

NEW TESTAMENT *Romans* 1 1 2 / *Ephesians* 1 9 11 / *II Timothy* 1 8 o
12 EPICTETUS *Discourses* BK IV CH 1 218b 219 CH 3 224d
18 AUGUSTINE *Confessions* BK VII par 6 44d 45a BK XI par 1 92b K XII par 18 103a b BK XII par 5 111d / *City of God* BK X CH 7 303 BK XII C 1 14 350d 351b CH 17 354a K XXII CH 2 587b 588a
19 AQUINAS *Summa Theologica* PART I QQ 19– 21 108d 127 Q 59 A 1 ANS 306c 307b A 2 ANS 307c 308b Q 60 A 1 REP 2 310b 311a Q 61 A 2 REP 1 315 316a Q 62 A 6 REP 1 322a d Q 63 A 1 ANS 325c 326c Q 66 A 2 ANS 345d 347b PART I II Q 1 A 2 REP 3 610b 611b Q 10 A 1 REP 2 662d 663d Q 19 A 9– 0 709d 711d Q 39 A 2 REP 3 790d 791b

4 The relation of the divine will and intellect

4b The f eedom of the divine w ll the di ne w ll in rel t on to the possibl nd the mpos ble

5 The freedom of the will

5a Interp etations of the meaning of free will

5a(1) The f eedom of the w ll as consisting in a freely determ ned choice or f ee judgment of the reason

5c Arguments against the freedom of the will free will as a violation of the course of nature or the re gn of causality the im possib lity of pro ng free will

12 LUCRETIUS N t e of Things BK II [251 293] 18b-d
17 PLOTINUS Third Enn ad TR I 78a 82b
18 AU U TINE City of God BK V CH 9-10 213b 216c
19 AQUINAS Summa Theologica PART I Q 83 A I REP 1-5 436d 438 PART I II Q 13 A 6 RE I 3 676c 677b
21 DANTE Dvine Com dy PURGATORY XVI [52-84] 77b d
22 CH UCER Nun s Priest s Tale [15 238 256] 456b-457a
23 HO BES Leviath n PART II 113b
25 MONT IGN Essays 218c 219a
31 SPINOZA Eth s PART DEF 7 355b OP 16-17 362 363c PROP 26-APPENDIX 365b 372d PART II ROP 48 49 391a 394d PART III 395a d ART IV PREF 422b d-423b
35 LOCKE H man Understandi g BK I CH II ECT 14 108d 109 BK II CH XXI SECT 22 25 183b-184b SECT 48 52 190c 191d passim esp S CT 49 190d 191a
35 HUM E Human U derstand ng S T VIII 478b 487
42 KANT Pure Reason 140b d 143a 164a 171a / Fu d Pr M t physic of M als 279b d 287d esp 282b 284d 285c 287b / Practical Re o 291a 293b 296a d 301d 302d 307d 314d esp 310b 311d 331c 337a 340a 342d / Int o M taphys of Mor l 390b d 391a / Judg ment 571 572
44 BOSW L J h n 392d 393a
51 TOLS Y War and P e EPILOGU II 692c 696d
53 JAMES P ych logy 291a 295b esp 293a 294a 295a b 822b 826 848b 849a
54 FR UD Or gin d Development f P ycho An l t 13 / G eral Introdu t 454b c 462d 486d

6 The naly s of the will s range of freedom

6a The limitat ons on the freedom of th will th d st nct on between acts of the will wh ch re necess tated and acts of the will wh ch e free

9 ARI TOTLE Eth s BK III H 2 357b 3 8a CH 4-5 359 361 pa im esp CH 5 [11 4 31 b 5] 360c d BK VI H [1139b5 11] 388 b
12 E ICTETUS Dis ses 105 245 c p K I CH 105a 106 H 8 124 125 9 134d 138a BK I CH 5 142c 144a CH 10 148 150a C I 3 170 172d BK II 177c 178d CH 0 185d 187 CH 4 189c 190 c 18 192 -c BK IV CH I 213a 223d
12 AUR L U Med t t s 253a 310d esp K II S CT 6 259 BK V ECT 9 272 BK VI SECT 16 275b-d SECT 22 276a BK VII SECT 16 280d BK VIII SECT 16-17 286d SECT 28 287c SECT 48 289c BK X SECT 34 35 301a b K XII SECT 3 307b d
18 AUGUSTINE City of God BK V CH 9-10 213b 216c
19 AQUINAS Summa Theologica PART I Q 18 A 3 ANS 106b 107c Q 19 A 3 ANS 110b 111c A 10 ANS 117d 118b Q 60 AA 3 311a 312b Q 62 A 8 323c 324 Q 82 AA I 2 431d 433c Q 83 A I REP 5 436d-438a A 2 ANS 438a d PART I II Q I A 5 613a 614a A 7 614c 615a Q 5 A 4 ANS and REP 2 639a 640b A 8 ANS and R P 2 642d 643d Q 10 662d 666a c Q 13 AA 5-6 675c 677b Q 17 A 5 R P 3 689c 690b A 6 ANS 690b d AA 7-9 690d 693d
20 AQUINAS Summa Theologica PART I II Q 50 A 5 REP 3 10b-d
21 DANTE D i ne Comedy PURGATORY XVIII [I 75] 79d 80c XXI [34-7] 85b d
23 HOBBES Levi than PART III 165c
31 DESCARTES D scou se PART III 50b / Objec tions and Repl es AXIOM VII 132a 141b 141d 228c
35 LOCKE Human Understandi g BK II CH XXI SECT 12 180d 181a SECT 52-53 191d 192b SECT 57 193b c SECT 59 193d 194a
42 KANT Pu e Reason 164a 165c esp 164b c 234 236a esp 235c d 236d 237a / Fund Prin Metaphysic of Morals 259c 260c 264d 265b / P acti al Reason 325d 326b
44 BOSWELL Johnson 407b
46 HEGEL Philosophy of Right INTRO par 8 21 14c 17c ART II par 118 42d-43b ADDITIONS 90 130b-d
48 MELVILLE Moby D k 159
51 TOLSTOY War and P ace BY XIII 577a 582a esp 57 d 579a BK XIV 605b d BK XV 630c 631a EPILO UE II 688a 694d
53 JAME Psychology 291a 295a esp 291a b 293a 388a 821b 822b 830a

6b The distinct on between the will s freedom of exercise and the will s freedom of choice

19 AQUINAS Summa Th ologica PART I II Q 6 A 3 646d 647b A 7 REP 3 650a d Q 9 A 3 659c 660a Q 10 A 2 ANS 663d 664d Q 13 A 6 ANS 676 677b
35 LOCKE Human U derstand g BK II CH XXI SECT 12 180d 181a

6c The distinction between voluntary be ha ior and behavior resulting from free choice comparison of men and animals w th respect to freedom

9 ARISTOTLE Ethics BK III CH 2 [1111b6-9] 357b
17 PLOTINUS Th d En ead TR III CH 3 93d 94c
19 AQUINAS Summ Th log a PA T I Q 19 A I ANS 117d 118b A 12 I 3 118d 119d Q 59 A 3 ANS 308b 309a Q 115 A 4 ANS 589d 590c PART I II Q 6 A 2 646a c Q 10

(6 *The analysis of the will's range of freedom*
6c The distinction between voluntary behavior and behavior resulting from free choice: comparison of men and animals with respect to freedom)

A 3 ANS 664d-665c; Q 11, A 2 667b-d; Q 12, A 5 672a-c; Q 13, A 2 673c-674c; Q 15, A 2 682a-c; Q 16, A 2 684d-685b; Q 17, A 2 687d-688b

25 MONTAIGNE *Essays* 218c-219b

31 DESCARTES *Discourse*, PART V 59c-60b / *Objections and Replies* 156a-d

35 LOCKE *Human Understanding*, BK II, CH XXI, SECT 8-11 180a-d

38 ROUSSEAU *Inequality* 337d-338a

42 KANT *Pure Reason* 164a-165c / *Practical Reason* 316c-317a / *Pref. Metaphysical Elements of Ethics* 372a-b / *Intro. Metaphysic of Morals* 386b-d; 393c-d / *Judgement* 584d-585d; 587a-588a

46 HEGEL *Philosophy of Right*, INTRO, par 11 15a-b; PART I, par 47 24a-b; ADDITIONS, 4 116a-d; 10 117d-118a; 28 121b / *Philosophy of History*, INTRO 168d; PART III 304d-305b

49 DARWIN *Descent of Man* 311b-d

51 TOLSTOY *War and Peace*, EPILOGUE II 689c-690a

7 The implications of free will

7a Free will as a source of human dignity: its relation to slavery and civil liberty

19 AQUINAS *Summa Theologica*, PART I, Q 59, A 3, CONTRARY 308b-309a; Q 62, A 8, REP 3 323c-324a; Q 96, A 4 512d-513c; PART I-II, PROLOGUE 609a-c; Q 20, A 6, REP 3 716b-d; Q 21, A 3, REP 2 718d-719c

21 DANTE *Divine Comedy*, PARADISE, V [19-84] 112b-113a

24 RABELAIS *Gargantua and Pantagruel*, BK I 65c-d

26 SHAKESPEARE *Julius Caesar*, ACT I, SC II [135-161] 570d-571a

31 SPINOZA *Ethics*, PART II, PROP 49, SCHOL 394c-d

32 MILTON *Areopagitica* 394b-395b

38 MONTESQUIEU *Spirit of Laws*, BK XII 85a

38 ROUSSEAU *Inequality* 338a / *Social Contract*, BK I 389a-d; 393b-c

42 KANT *Fund. Prin. Metaphysic of Morals* 271d-279d esp 273d-277b / *Practical Reason* 325d-326b; 327d-329a; 341b-342c; 344a; 346b-348b esp 348a-b; 355a-d / *Judgement* 594b-595c

43 MILL *Liberty* 316b-d

46 HEGEL *Philosophy of Right*, INTRO, par 8 16c-d; par 21 17a-c; PART I, par 36 21b-c; par 48 24b-c; par 57 26b-27a; ADDITIONS, 14 118c-d; 36 122b-c; 62 126a; 67 126d / *Philosophy of History*, INTRO 161c; PART I 230a-c; 236a; PART IV 350b-c

51 TOLSTOY *War and Peace*, BK XIII 577a-578b; 581c-582a; BK XIV 605b-d; BK XV 630c-631a; EPILOGUE II 688a-690a

52 DOSTOEVSKY *Brothers Karamazov*, BK V 127b-137c passim

7b The factors of freedom and necessity in the philosophy of history

15 TACITUS *Annals*, BK III 49c; BK IV 69a; BK VI 91b-d / *Histories*, BK I 194b

18 AUGUSTINE *City of God*, BK I, CH 36 149c-d; BK IV, CH 33 206c-d; BK V, CH 1 207d-208c

21 DANTE *Divine Comedy*, PURGATORY, XVI [52-105] 77b-d

43 MILL *Representative Government* 332a-d

46 HEGEL *Philosophy of Right*, PART III, par 340-347 110b-111c; par 352-360 112b-114a,c / *Philosophy of History*, INTRO 160b-164d; 168b-d; 170a-172b; 175c-176c; 179b-c; 182d-186a,c; 203c-206a,c; PART IV 315a; 348a; 368d-369a,c

50 MARX *Capital* 7c; 10b-11b

51 TOLSTOY *War and Peace*, BK III 140b-143a,c; 144d; BK IX 342a-344b; BK X 389a-391c; 405a-b; 430d-431a; 447c-448c; 465c-467a; BK XI 469a-472b; BK XIII 563a-571a; BK XV 618b-621b; EPILOGUE I 645a-650c; EPILOGUE II 675a-696d

7c Human freedom in relation to the will of God: fate, predestination, and providence

OLD TESTAMENT: *Genesis*, 3 / *Exodus*, 4:21; 7:14 esp 7:3; 9:12; 10:1; 14:17 / *Deuteronomy*, 11:26-28; 30:15-20 / *Joshua*, 11:19-20; 24:14-24—(D) *Josue*, 11:19-20; 24:14-24 / *Judges*, 9:23 / *I Kings*, 8:57-58—(D) *III Kings*, 8:57-58 / *Job*, 3:23; 12:14-25; 34:29 / *Psalms*, 119:36; 139:15-16; 141:4—(D) *Psalms*, 118:36; 138:15-16; 140:4 / *Proverbs*, 21:1 / *Ecclesiastes*, 1:4; 14:15; 3:14-15; 6:10; 7:13-15; 9:1-2; 11:5-6 / *Isaiah*, 14:24-27; 63:17; 64:8—(D) *Isaias*, 14:24-27; 63:17; 64:8 / *Malachi*, 4:6—(D) *Malachias*, 4:6

APOCRYPHA: *Wisdom of Solomon*, 7:16; 19:4—(D) OT, *Book of Wisdom*, 7:16; 19:4 / *Ecclesiasticus*, 15:11-20—(D) OT, *Ecclesiasticus*, 15:11-21

NEW TESTAMENT: *Matthew*, 6:10; 20:1-16 esp 20:15; 26:23-37; 26:39 / *Luke*, 22:3-4 / *John*, 5:21; 6:22-71 esp 6:37; 6:40; 6:44-45; 6:64-65; 6:70-71; 10:26-29; 12:37-40; 13:18-27—(D) *John*, 5:21; 6:22-72 esp 6:37; 6:40; 6:44-45; 6:65-66; 6:71-72; 10:26-29; 12:37-40; 13:18-27 / *Acts*, 4:27-28; 7:51; 13:48; 17:24-27 esp 17:26 / *Romans*, 8:28-9:26 esp 8:28-30; 9:18-21; 11:1-10 / *I Corinthians*, 7:21-23; 9:16-17; 12 / *Ephesians*, 1:3-12; 2:8-10; 4:7-14 / *Philippians*, 2:12-13 / *I Thessalonians*, 5:18 / *II Thessalonians*, 11:14—(D) *II Thessalonians*, 2:10-13 / *II Timothy*, 1:8-9 / *James*, 4:3-15 / *I Peter*, 1:1-5

4 HOMER *Iliad*, BK VI [342-358] 43c-d; BK XIX

[74 144] 137d 138c BK XXIV [507-551] 176c 171a / Odyssey BK XIV [441 445] 264c BK X I [117 150] 285b c
5 AESCHYLUS Agamemnon [160-254] 53d 54d / Choephoroe 70a 80d esp [269-314] 72d 73b [885 1016] 78d 80d / Eumenides 81a 91d
5 SOPHOCLES Oedipus the King 99 113a c esp [297 1415] 111b 112b / Oedipus at Colonus 114 130a c esp [58 29] 116c d [939-1015] 123a d / Philoctetes [169-200] 183d 184a [13 6-1347] 193d 194a
5 EURIPIDES Helen [711 7 1] 304d 305a / Electra 327a 339 c esp [1168 1359] 337d 339a c / Heracles Mad [1255 1357] 376a d / Orestes 394a-410d esp [418-629] 398d 400b
6 HERODOTUS History BK I 7b 8 20a 22a 46c d BK III 98b-99a BK VII 218b 220b BK IX 291b-c
7 PLATO Republic BK X 439b-441a c / Laws BK 650a b BK IV 679 b BK X 765d 769c esp 767 768b
12 EPICTETUS Discourses BK I CH I 106a b CH I 118d 120b CH 17 123c d K I CH 2 197c 198b CH 24 208d 210a BK IV CH I 218b 219c CH 3 224d CH 7 233d 234a
12 AURELIUS Meditations BK II SECT II 258 b BK I SECT II 262a b K VI SECT 44 278b c
13 VIRGIL Aeneid BK IV [33 -36] 176a 177a
14 PLUTARCH Coriolanus 188d 189c / Sulla 370c 371b
15 TACITUS Annals K III 49b c BK IV 69a BK VI, 91b-d
17 PLOTINUS Third Ennead TR II III 82c 97b passim
18 AUGUSTINE Confessions BK II par 14 12a b / City of God BK C I 36 149 d BK I CH 33 206c d K V CI 207d 208c CH 9-10 213b 216c K XVIII CH 2 472d-473a
19 AQUINAS Summa Theologica PART I Q 7 A I ANS 100d 101d Q 9 A 8 116a d Q 22 A 2 REP 4-5 128d 130d Q 23 132b 141 Q 83 A I REP 2-4 436d-438a Q 00 A 2 REP 521c 522b Q 103 A 5 R 3 531b 532b Q 5 A 4 541 542a Q 16 592d 595 passim PART II Q 6 A I R P 3 644d 646a A 4 REP 647b 648a Q 9 A 6 662 d Q 0 A 4 665d 666a c Q 21 A 4 R P 719d 720a
21 DANTE Divine Comedy H L VII [6 96] 10b-c PURGATORY XVI [5 I 5] 77b d RADI E I [94 42] 107b d I [64-90] 110a b XX [31 48] 137a 138b
22 CHAUCER Troilus and Cressida BK V TANZA 150-154 108a b / Nun's Priest Tale [15 236-256] 456b 457a / Canon Yeoman's Tale [16 940-949] 487a
23 M HI V L P I C I XXV 35 b
23 HOBBES Leviathan PA T II 113b c ART IV 272b-c
25 MONTAIGNE Essays 250 342a b
27 SHAKESPEARE Hamlet ACT I I II [0-2 3] 51b / King Lear A T I SC [128 64] 249a b
29 CERVANTES Don Quixote PART II 408c
31 DESCARTES Objections and Replies 141b
31 SPINOZA Ethics PART I APPENDIX 369b-372d passim
32 MILTON Paradise Lost BK III [80-134] 137a 138a [167 16] 139 140a BK V [2 4 45] 180 b [506-543] 186 187a BK VI [168 188] 200a BK VII [139-173] 220 221a BK IX [342 375] 254b 255b BK X [1-62] 274b 275b [615 640] 287b 288b / Areopagitica 394b 395b
35 HUME Human Understanding SECT VIII DIV 78 81 485c-487a
41 GIBBON Decline and Fall 230b
42 KANT Practical Reason 334a 335c
44 BOSWELL Johnson 173c 392d 393a 549c
46 HEGEL Philosophy of History INTRO 158c 160b 161d 162a 182d 184d
48 MELVILLE Moby Dick 158b 159a 396b 409b 410b
51 TOLSTOY War and Peace K IX 342a 344b 357b 358b BK X 447d BK XI 481d BK XII 553b BK XV 619d 620a 630d 631c EPILOGUE I 650b c EPILOGUE II 675a 677b 680b c 684b d
52 DOSTOEVSKY Brothers Karamazov K V 121d 137c passim
54 FREUD Interpretation of Dreams 246c 247d / General Introduction 582 b

7d God as the object of the human will the quiescence of the will in the beatific vision

OLD TESTAMENT Exodus 33 18 3 / Deuteronomy 4 29 / I Chronicles 10 11 28 9—(D) I Paralipomenon 16 1 28 9 / II Chronicles 52 4 2 15—(D) II Paralipomenon 15 2 4 12 15 / Psalms 27 8 42 1 6 63 1-6 7 4 73 25 8 84 2 3 119 10—(D) Psalms 6 8 41 -6 62 1-6 69 4 72:25 28 83:2 3 118 1 / Isaiah 26 8 9—(D) Isaias 26 8-9 / Jeremiah 29 13—(D) Jeremias 29 13 / Amos 5 4 8
APOCRYPHA Wisdom of Solomon 1 1 13 1 9—(D) OT Book of Wisdom 1 1 13 1 9
NEW TESTAMENT Philippians 3 7 10
18 AUGUSTINE Confessions BK I par 1 1a b K VII par 22 50a K XI par 1 101d / City of God BK XIV CH 11 385d 387a K XV 11 21 22 415b 416 BK XXII CH 3 617 618a / Christian Doctrine BK I CH 4 625b c 1 15 628b c
19 AQUINAS Summa Theologica PART I Q 12 A I ANS 50c 51c A 8 REP 4 57b 58b Q 59 A 4 REP 3 309a 310a Q 60 A 5 313b 314c Q 82 A 2 ANS 432d-433 A 3 ANS and REP 3 433c 434 Q 95 506b 510a Q 100 520d 522b Q 105 A 4 ANS 541 542 Q 11 A 2 AN 569 570b PART I I Q I A 8 615 Q 2 A 8 621c 622b Q 3 A I 622c 623a A 4 625a 626b Q 4 AA 1 4 629d 632c Q 5 A I ANS 636d 637c A 4 ANS and REP 2 639a 640b A 5 REP I 640b 641a Q 9 A 6 662a d Q 11 A I REP I

(7d *The implications of free will* 7d *God as the object of the human will: the quiescence of the will in the beatific vision*)

666b-d 667a AA 3-4 667d-669b Q 12 A 2 670b-c A 3 REP 1 670d-671b Q 13 A 1 ANS 672d-673c Q 16 A 3 CONTRARY and REP 3 685b-686a Q 19 A 9 ANS 709d-710b A 10 710b-711d

20 AQUINAS *Summa Theologica* PART I-II Q 62 59d-63a PART II-II Q 25 A 1 501b-502a A 12 509c-510b Q 26 AA 2-3 511a-512c Q 7 AA 3-8 522c-527b PART III Q 9 A REP 3 764c-765a

21 DANTE *Divine Comedy* PURGATORY XXI [34-8] 85b-d PARADISE I [97-142] 107b-d III [43-90] 109d-110b XX [130-141] 138a XXI [64-75] 138d-139a XXVI [25-36] 146a

42 KANT *Practical Reason* 325a-327d esp 326b-327a 33 a-355d esp 346b-347c

52 DOSTOEVSKY *Brothers Karamazov* BK V 127b-137 passim

7e. Free will in relation to sin and salvation

7e(1) The freedom to sin: Adam's freedom and the freedom of fallen human nature

OLD TESTAMENT *Genesis* 3 / *Deuteronomy* 11:26-28 30:15-o / *Joshua* 24:14 4—(D) *Josue* 24:14-24 / *Isaiah* 5:1-7—(D) *Isaias* 5:1-7

APOCRYPHA *Ecclesiasticus* 15:11-20—(D) OT *Ecclesiasticus* 15:1-21

NEW TESTAMENT *Romans* 5:12-8:21 / *Hebrews* 10:26-31

18 AUGUSTINE *Confessions* BK VII par 5 44c-d / *City of God* BK V CH 9-10 213b-216c BK XII CH 21 357a-b BK XIV CH 11-12 385d-387b CH 15 388d-390a BK XXII CH 1 587a-b CH 3 617c-618a

19 AQUINAS *Summa Theologica* PART I Q 17 A 1 AN 100d-101d Q 2 A REP 4 128d-130d A 3 REP 3 130d-131c Q 23 A 1 REP 132c-133b A 3 REP 3 134b-135 Q 4 A 3 142d-143c Q 4 A ANS 257b-258c Q 62 A 3 REP 2 319c-320b A 8 323c-324a Q 63 A 1 RE 4 325c-326 AA 5-7 329a-332b A 9 REP 3 333b-d Q 83 A 2 ANS and REP 3 438 d Q 10 A 2 521c-522b PART II Q 1 A 7 REP 1 614c-615 Q 6 A 8 650d-651c Q 0 A 6 REP 3 662a-d Q 2 A 2 718a-d

20 AQUINAS *Summa Theologica* PART I-II Q 74 A 1-2 129a-130a Q 09 A 2 339c-340b A 7 0 344 347d

21 DANTE *Divine Comedy* PURGATORY XVI [52-105] 77b-d XVII [8]-XVIII [75] 79b-80c PARADISE I [94-142] 107b-d IV [64-114] 111b-d V [19-30] 112b II [25-33] 115c

30 BACON *Advancement of Learning* 17d-18a

32 MILTON *Paradise Lost* BK III [80-134] 137a-138a [167-216] 139-140 BK V [224-245] 180a-b [506-543] 186a-187a BK IX [34 3] 254b-255b BK X [1-16] 274b / *Samson Agonistes* [373-419] 347b-348b / *Areopagitica* 394b-395b

35 LOCKE *Toleration* 8c-d 10c-d 15d-16a

46 HEGEL *Philosophy of History* PART III 304d-305b

51 TOLSTOY *War and Peace* EPILOGUE II 689b

52 DOSTOEVSKY *Brothers Karamazov* BK V 127b-137c passim

7e(2) The relation of freedom to grace

OLD TESTAMENT *Psalms* 95:7-9—(D) *Psalms* 94:7-9 / *Proverbs* 1:20-33 / *Isaiah* 5:1-7—(D) *Isaias* 5:1-7

NEW TESTAMENT *John* 1:1-18 esp 1:5 1:10-13 5:21 6:37 64-66 8:31-36 10:26-29 12:37-40 13:18 27 / *Acts* 7:51 13:38-48 15:1-11 / *Romans* 4-8 9:9-18 11:5 10:26-32 / *I Corinthians* 7:21-23 9:1 19-21 / *II Corinthians* 3:17 6:1-2 / *Galatians* 4-5:1 4:13 18 22-24 / *Ephesians* 1:3-12 2:4-10 / *Philippians* 2:12-13 / *Titus* 3:3-7 / *James* 1:25 2:10-12 / *I Peter* 2:15-16 / *Revelation* 3:0—(D) *Apocalypse* 3:20

18 AUGUSTINE *Confessions* BK IX par 1 61c-d / *City of God* BK X CH 32 319d-322 c BK XV CH 1 398a-c BK XXII CH 1 587 b CH 30 617c-618a

19 AQUINAS *Summa Theologica* PART I Q 23 A 3 REP 3 134b-135a AA 5-6 135d-138c A 8 140a-141a Q 62 A 3 REP 2 319c-320b A 4 ANS 320b-321b Q 83 2 CONTRARY 438a-d Q 95 A 1 RE 3 5 506b-507c Q 100 A 2 REP 1 521c-522b PART I-II Q 5 A 5 REP 1 640b-641a Q 9 A 6 RE 3 662a-d

20 AQUINAS *Summa Theologica* PART I-II Q 108 A ANS and REP 2 331a-332b Q 109 2 339c-340b Q 110 A 4 350d-351d Q 111 2 352d-353d Q 113 A 3 362c-363c A 5 364b-365a PART II-II Q 183 A 4 REP 1 627d-628d

21 DANTE *Divine Comedy* PURGATORY I [22-84] 53b-54a V [58-66] 59c VII [37-6] 62d-63a XI [5-45] 69a-b XII [115-136] 71c-d XXI [34-72] 85b-d XXVII [124-142] 95d-96a PARADISE III [64-90] 110a-b VII [64-84] 115d-116a XX [31-148] 137a-138b XXI [52-75] 138d-139a

31 DESCARTES *Meditations* IV 91a-b / *Objections and Replies* 125c-126b

32 MILTON *Paradise Lost* BK II [27-1033] 133b BK III [56-415] 136b-144b esp [30-134] 138 [227-238] 140b BK XI [251-262] 304b-305a BK XI [576-605] 331b-332a

33 PASCAL *Provincial Letters* 141a-166b esp 154b-159a

42 KANT *Pure Reason* 238b

43 MILL *Liberty* 296b-297b

46 HEGEL *Philosophy of Right* PART II par 140, 50a / *Philosophy of History* PART III 310d-311a

(8b The goodness or mal ce of the will)

8b(2) A good w ll as the exclusive or prin cipal human good

12 E ICTETUS *Di cou ses* BK I CH II 116d 118d c 22 127c 128c CH 25 129d 131b CH 29 134d 138a BK II CH 16 156b 158d BK III CH 10 185d 187a
18 AUGUSTINE *C ty of God* BK IX CH 4 287a 288b
19 AQUINAS *Summa Tl eologica* PART I II Q I A I REP 2 609b 610b Q 3 A 4 625a 626b Q 19 A I REP 2 703b d
30 BACON *Advancement of Learn g* 72a
42 KANT *Fi nd Pri Metapl ys c of Morals* 256a 261d esp 256a b 257c d / *P ctical Reason* 314d 319b esp 316a 317d 321b 329a / *I tro Metaphys c of Mo als* 389a 390a c / *Judge ment* 591b 592a
43 MILL *Utilitar anism* 453c 454a 463c 464d

8c The will and virtue justice and charity as habits of the will

9 AR STOTLE *Eth cs* BK I CH 13 [110 b13 1103 4] 348a c BK I C I 6 [1106b36-11 7 3] 352c BK III CH 1-5 355b d 361a BK V CH 8-11 383a 387a c BK VI CH 2 387d 388b CH 13 [1145 3 5] 394d BK VII H I 10 395a 403c
18 AUGUSTINE *City of God* BK IX CH 4 5 287a 289a K XII CH 8-9 346d 348b BK XIV CH 6-9 380b 385b K XV CH 21 22 415b 416c
19 AQUIN S *Summa The logica* PART I Q 21 A I REP I 124b 125b A 2 RE 125c d Q 59 A 4 RE 3 309 310a Q 60 A 5 ANS and R P 4 313b 314c QQ 95-96 506b 513c Q 100 520d 522b PART I II Q 5 A 5 RE I 640b 641a Q 13 A I ANS 672d 673c Q 9 A 10 ANS 710b-711d
20 AQUIN S *Summa Theologica* PART I II Q 50 A 5 10b d Q 55 A I R 2 26b 27a Q 56 A 6 34b-35 Q 59 A 4 NS and REP 2 48c-49a Q 60 A 2 3 50d 52b Q 62 A 3 61c 62b A 4 ANS 62b-63 P RT II II Q 23 A 8 ANS 488d-489c Q 24 A I 489d 490b A 10 R P 3 496d 498a
23 HOBBE *Let athan* PART I 240d 245b
38 ROUSSEAU *Political Economy* 369a-c 372b c / *So i l Contract* K I 393b
42 K NT *Fund Prin M t phys c f Morals* 256 b
43 MILL *Util ta i nism* 463c-464d
53 J ES *Psych logy* 81b 83b 186b 187a 807a 808a 816a 819 esp 818a

8d The will and d ty the categorical imper ati e

12 AUR LIUS *Med atio* BK VIII ECT 32 287d 288a
19 AQUINAS *Summa Th logica* PART I Q 25 A 3 R P 3 145b 147 P RT I II Q 19 AA 3-6 704c 708a 9- 709d 711d
21 DANT *Di ine Com dy* P RAD SE V [13-84] 112b-113a
25 MONTAIGNE *Essays* 13d 14c
38 ROUSSEAU *Political Economy* 372b 373b / *Social Contract* BK I 393b c
42 KANT *Pure Reason* 190c d 236d 237a / *Fund Prin Metaphysic of Morals* 253d 254d 260a 261d 265c 266d 268c 270c 272a b 273d 279d esp 277d 279d / *Practical Reason* 321b 329a 330d 331a / *Pref Metaphys cal Elements of Ethics* 365b d 373d / *Intro Me a physic of Morals* 386b d 388b c 389a 390a c 390b 392b 393a / *Science of Right* 416b 417b / *Judgement* 571c d 605d 606b [fn 2]
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II Works by authors not represented in this collection

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Chapter 101 WISDOM

INTRODUCTION

THE special character of wisdom among the attainments of the mind shows itself in the things which everyone will agree can be said about wisdom—things which cannot be said about art and science or knowledge and learning generally We believe that with the centuries knowledge can be steadily increased and learning advanced but we do not suppose that the same progress can be achieved in wisdom The individual may grow in wisdom The race does not seem to

In the tradition of the great books the moderns usually assert their superiority over the ancients in all the arts and sciences They seldom claim superiority in wisdom The phrase modern science needs no elucidation but if anyone were to speak of modern wisdom he would have to explain his meaning As modern seems to have an immediately acceptable significance when it qualifies science so ancient seems to go with wisdom and to suggest that with the centuries far from increasing wisdom may be lost

Wisdom is more frequently and extensively the subject of discussion in the ancient and mediaeval than in the modern books The ancients seem to have not only a greater yearning for wisdom but also a greater interest in understanding what wisdom is and how it can be gained The traditional discussion of wisdom furthermore has its foundations in the literature of the Old and the New Testament as well as in the books of pagan antiquity

This is not true of other forms of knowledge The teachings of revealed religion open a path to the heart of wisdom They do not propose methods of scientific research Again and again the Scriptures proclaim that fear of the Lord is the beginning of wisdom —a wisdom which develops with piety and worship as science develops with experiment and proof

Still another distinctive mark of wisdom is that it cannot be misused We recognize that bad men as well as good may possess other kinds of knowledge We have seen artistic skill and scientific truth put to evil use But we do not ordinarily think a man wise unless he acts wisely To act wisely is to act well even as to have wisdom is to use it The satirist s praise of folly condemns a useless wisdom The theologian s condemnation of worldly wisdom dismisses it as the worst of folly—a counterfeit of wisdom

Other forms of learning may separate knowledge from action wisdom tends to unite them Other forms of inquiry may be content with knowing and understanding the facts the pursuit of wisdom aspires to a knowledge of good and evil Plato for example makes the vision of the good the goal of a dialectic which ascends to wisdom yet which does not rest there but returns enlightened to the realm of action This conception of wisdom is hinted at wh never we refrain from calling a man wise simply because he is learned—a scholar scientist or philosopher

Again it is Plato who respects wisdom so highly that he will not call the philosopher wise but only a lover of wisdom No god is a philosopher or seeker after wisdom for he is wise already Socrates says in the *Symposium* nor does any man who is wise seek after wisdom Neither do the ignorant seek after wisdom The lovers of wisdom are neither the wise nor the ignorant and foolish As Socrates points out they are in a mean between the wise and the ignorant

Aristotle would seem to disagree not from a lower regard for wisdom but because he identifies wisdom with philosophical knowledge and especially with that highest branch of speculative science which is called theology first philosophy or metaphysics His use

of the phrase philosophical wisdom to distinguish speculative from practical or political wisdom suggests that the philosopher may attain the wisdom he pursues Yet Aristotle like Plato speaks of philosophers or lovers of wisdom and Plato like Aristotle treats wisdom as one of the basic human virtues

WE SHALL RETURN TO THE distinction which both Aristotle and Aquinas make between practical and speculative wisdom they often call the latter simply wisdom in contrast to prudence which is their name for practical wisdom Other writers who treat wisdom as on sometimes emphasize its speculative and sometimes its practical aspect But for all of them this double aspect remains part of wisdom s special character

Lucretius for example finds nothing more gladdening than to dwell in the calm high places firmly embattled on the heights by the teaching of the wise whence you can look down on others and see them wandering hither and thither going astray as they seek the way of life The way of life free from pain the distress of fear and futile struggle is known only to the wise Calm and repose are here suggested as attributes of the wise man That also seems to be the implication of Dr Johnson s approbation of one who had attained to the state of the philosophical wise man that is to have no want of anything When Boswell observes that th n the savage is a wise man Johnson re to ts Sir I do not mean simply being without —but not having a want

For Plotinus wisdom seems to be purely speculative and its repose a condition of the reasoning mind at rest Wisdom he writes is a condition in a being that possesses repose Think what happens when one has accomplished the reasoning process as soon as we have discovered the right course we cease to reason We rest because we have come to wisdom Still wisdom has a moral or for Plotinus an aesthetic aspect One Soul he says is wise and lovely another foolish and ugly Soul beauty is constituted by wisdom

The practical or moral aspect of wisdom predominates in Milton Rabelais and Tolstoy In *Pa d se Lost* Adam communicates his reflections on human knowledge to Raphael

But apte the Mind or Fancie is to roave
Uncheckt and of her roavi g is no end
Till warn d or by experience taught she learn
That not to kno at large of things remote
From use obscure and suttle but to kno
That which before us lies in daily life
Is the prime Wisdom what is more is fume,
Or emptiness or fond impertinence
And renders us in things that most concerne
Unpractis d unprepar d and still to seek.

Gargantua writing a letter to his son Pantagruel while the latter is a student in Paris admonishes him in the words of Solomon that Wisdom entereth not into a malicious mind and that knowledge without conscience is but the ruin of the soul In *War and Peace* Pierre after reiterating that All we can know is that we know nothing And that s the height of human wisdom learns from the Mason that the highest wisdom is not founded on reason alone nor on those worldly sciences of physics chemistry and the like into which intellectual knowledge is divided The highest wisdom the Mason continues is but one science—the science of the whole—the science explaining the whole creation and man s place in it To re c ive that science it is necessary to purify and renew one s inner self And to attain this end we have the light called conscience that God has implanted in our souls

Though Plato defines wisdom as the virtue o reason—that part of the soul which is for him the faculty of knowledge—he gives it the function of directing conduct as well as contemplating truth Him we call wise Socrates declare in the *Republic* who has in him that littl part which rules and which has a knowledg of what is for the interest of each of the thre parts and of the whole In the state as in th soul how can there be the least shadow o wisdom the Athenian Stranger asks in th *Laws* where there is no harmony?

There is no harmony or wisdom when fa reasonings have their habitation in the sou and yet do no good but rather the reverse c good because reason fails to rule or be obeyed When the soul is opposed to knowledge c opinion or reason which are her natural lords th Athenian Stranger goes on that I ca folly just as it is in the state when the mult tude refuses to obey their rulers or the laws.

The four virtues which Plato

in both the *Republic* and the *Laws* are wisdom temperance courage justice Justice is given a certain preeminence in the *Republic* as some how embracing the other three but in the *Laws* the ruling virtue is wisdom Calling the virtues divine goods to distinguish them from such things as health beauty strength and wealth the Athenian Stranger makes wis dom chief and leader of the divine class of goods Next he says follows temperance and from the union of these two with courage springs justice and fourth in the scale of virtue is coura, As the principle of these other vir tues wisdom like them engages in the life of action It does not move solely in the realm of thought

WHEN HE REFERS TO WISDO 1 as one of the four virtues Aristotle uses the word wisdom as if it named a single virtue In the passage in the *Politics* in which he says that the courage justice and wisdom of a state have the same form and nature as the qualities which give the individual who possesses them the name of just wise or temperate he does not divide wisdom into the speculative and the practical But he seldom overlooks that separation The passage just cited for instance begins with the statement that each one has just so much hap-piness as he has of virtue and wisdom and of virtuous and wise action

Here the reference to virtue *and* wisdom places wisdom outside the virtues when the latter are conceived exclusively as *moral* vir tues Wisdom for Aristotle is a virtue only in the order of intellectual excellence not of moral excellence or character As an intellectual vir tue wisdom is not even involved in the growth or exercise of the moral virtues It is as possible Aquinas says following Aristotle to have the cardinal moral virtues without wisdom as it is to have them without art or science But for both Aquinas and Aristotle this is neither true nor intelligible unless we bear in mind the dis tinction between philosophical and practical wisdom or between wisdom and prudence

Though prudence is no less than wisdom an intellectual virtue—a quality of mind rather than of character—it belongs with the moral virtues As the chapter on VIRTUE ind cates the cardinal virtues according to Aquinas in clude prudence not wisdom Similarly as may be seen in the chapter on PRUDENCE Aristotle's theory holds it impossible to be good without practical wisdom just as it is impossible to be practically wise without moral virtue

Practical wisdom Aristotle writes is con cerned with things human and things about which it is possible to deliberate Philosophic wisdom on the other hand will contemplate none of the things that make a man happy To explain the difference Aristotle uses the ex ample of the early Greek sages We say Anax agoras Thales and men like them have phil osophic but not practical wisdom when we see them ignorant of what is to their own advan tage They know things that are remark able admirable difficult and divine but use-less ıı because it is not human goods they seek

If wisdom connotes the highest form of knowledge then the name according to Aris totle is more properly applied to speculative than to practical wisdom The highest form of knowledge in his view is concerned with the highest objects Hence he says it would be strange to think that practical wisdom is the best knowledge since man is not the best thing in the world But if the argument be that man is the best of the animals this makes no difference for there are other things much more divine in their nature than man and wisdom is knowledge of the things that are highest by nature

When Hobbes distinguishes between pru dence and sapience he does not assign a pecial object to wisdom As much experience is *Pru dence* he writes so is much science *Sapi ence* It is the amount of science a man posses ses not his possession of a particular kind of knowledge which makes him wise Descartes seems to take a similar view when he says that the sciences taken all together are identical with human wisdom But for Aristotle and Aquinas philosophical wisdom can be differen tiated from the other speculative virtues such as the understanding of first principles or the scientific knowledge of the conclusions which can be demonstrated from them It involves them but it is distinct from them insofar as it uses principles to demonstrate conclusions con cerning the highest causes Wisdom can be

called a science if it is understood that by reason of its object it stands at the apex of the sciences crowning and perfecting them

In the opening pages of his *Metaphysics* Aristotle identifies wisdom with the supreme philosophical science—the science which inves tigates first principles and causes He calls it a divine science or theology for as he says God is thought to be among the causes of all things and to be a first principle It is not the most useful science but the most desirable on its own account and for the sake of knowing It alone exists for its own sake All the sciences indeed are more necessary than this but none is better

While adopting Aristotle s conception of wis dom Aquinas finds it most eminently repre sented among the sciences not by metaphysics or the theology of the philosophers but by sacred doctrine or the theology based on reve lation Since it is the part of a wise man to order and to judge he writes and since lesser matters can be judged in the light of some higher cause therefore he who considers absolutely the highest cause of the whole uni verse namely God is most of all called wise But sacred doctrine essentially treats of God viewed as the highest cause for it treats of Him not only so far as He can be known through creatures just as the philosophers know Him but also so far as He is known to Himself alone and revealed to others Hence Aquinas concludes sacred doctrine is especially called wisdom

THE CONTRAST BETWEEN THE wisdom of the philosopher and the wisdom of the theologian is more fully discussed in the chapters on METAPHYSICS and THEOLOGY But we are concerned here with the further implications of the differ ence between natural and supernatural wisdom or the wisdom of man and of God

The Greeks insistently raise the question whether man can have wisdom In the *Apology* Socrates tells his accusers that his cross exami nation of the pretenders to wisdom was a duty imposed upon him by the oracle which declared that there was no man wiser than himself To understand the oracle s meaning he tried to seek out wisdom in other men but he says at his trial I found that the men most in repute were all but the most foolish This gave him an insight into the kind of wisdom which he himself possessed

My hearers always imagine Socrates de clares that I myself possess the wisdom whi h I find wanting in others but the truth is O men of Athens that God only is wise and by his answer he intends to show that the wisdom of men is worth little or nothing he is not speak ing of Socrates he is only using my name by way of illustration as if he said He O men is the wisest who like Socrates knows that his wisdom is in truth worth nothing Again in the *Phaedrus* Socrates refuses to call any man wise for that is a great name which belongs to God alone For men lovers of wisdom or philosophers is the modest and befitting title

Aristotle also says of the science which most deserves the name of wisdom because it is a science of divine things that such a science either God alone can have or God above all others He does not think that the divine power can be jealous but if there were any truth in what the poets say about the jealousy of the gods it would probably occur in this case above all and all who excelled in this knowledge would be unfortunate To what ever extent the possession of wisdom might be justly regarded as beyond human power it would be unfitting in Aristotle s opinion for man not to be content to seek the knowledge that is suited to him

This is even more typically a Christian than a pagan sentiment Christians have a special knowledge writes Montaigne how natural and original an evil curiosity is *in man the* thirst of knowledge and the desire to become more wise was the first ruin of human kind and the way by which it precipitated itself in eternal damnation In *Pa adise Lost* as he is about to leave the Garden of Eden Adam sav to the angel Michael

Greatly instructed I shall hence dep rt
Gre tly in pea e of thou ht and have my fill
Of knowledge what th s ve sel can containe
Bey d wh ch was my folly to aspire

To which the angel replies

This having learnt thou ha t attai ed th summe
Of w sdom

But Sacred Scripture does more than enjoin man to humble himself before the

tween human wisdom at its best and the infinite wisdom of God It does more than say in the words of Jeremiah Let not the wise man glory in his wisdom for it also says that fools despise wisdom In the Epistle of James we find true wisdom set apart from false If the knowledge of the wise man is not accompanied by the *meekness of wisdom if instead there is bitter envying and strife in your hearts* then this wisdom descendeth not from above but is earthly sensual devilish But the wisdom that is from above is first pure then peaceable gentle and easy to be intreated full of mercy and good fruits without partiality and without hypocrisy

St Paul asks *Hath not God made foolish* the wisdom of this world? When

> the world by wisdom knew not God it pleased God by the foolishness of preaching to save them that believe
>
> *For the Jews require a sign and the Greeks seek* after wisdom
>
> But we preach Christ crucified unto the Jews a stumbling block and unto the Greeks foolishness
>
> But unto them which are called both Jews and Greeks Christ the power of God and the wisdom of God
>
> Because the foolishness of God is wiser than men and the weakness of God is stronger than men

My speech and my preaching St Paul continues to the Corinthians

> *was not with enticing words of man s wisdom* but in demonstration of the Spirit and of power
>
> That your faith should not stand in the wisdom of men but in the power of God
>
> Howbeit we speak wisdom among them that are perfect yet not the wisdom of this world nor of the princes of this world that come to nought
>
> But we speak the wisdom of God in a mystery even the hidden mystery which God ordained before the world unto our glory

Wonder is the beginning of the kind of natural wisdom which a philosopher like Aristotle regards as the ultimate goal of human inquiry But the supernatural wisdom of which Scripture speaks begins with the fear of God and comes to man not through his efforts at learning but only as a divine gift *If any of you* lack wisdom St James declares let him ask God that giveth to all men liberally and upbraideth not and it shall be given him It is *wrong for a man to take pride in his own learning* but according to Pascal the proper place for pride if in wisdom for it cannot be granted to a man that he has made himself wise God alone gives wisdom and that is why *Qui gloriatur in Domino glorietur*

The theologians dwell at length on the text of the Psalmist that the fear of the Lord is the *beginning of wisdom Enumerating* seven steps to wisdom Augustine writes First of all it is necessary that we should be led by the *fear of God* to seek the knowledge of His will what He commands us to desire and what to avoid Now this fear will of necessity excite in us the thought of our mortality and of the death that is before us and crucify all the motions of pride as if our flesh were nailed to the tree *Then in* succession come the steps of piety knowledge resolution counsel purification of heart and finally the holy man will be so single and so pure in heart that he will not step aside from the truth *either for the* sake of pleasing men or with a view to avoid any of the annoyances which beset this life Such a man ascends to *wisdom* which is the seventh and *the last step* and which he enjoys in peace and tranquility

Only the wisdom which begins with faith according to Aquinas also begins with fear A thing may be called the beginning of wisdom in two ways *he explains* in one way because it is the beginning of wisdom itself as to its essence in another way as to its effect Thus the beginning of an art as to its essence consists in the principles from which that art proceeds while the beginning of an art as to its effect is that wherefrom it begins to operate *Aquinas* then points out that wisdom is considered by theologians in one way and in another way by philosophers As the wisdom of the philosophers does not begin with articles of faith but *with axioms of reason so it does not begin* with fear but with wonder

The wisdom of the philosophers and the wisdom of the religious both consist in knowledge of divine things but wisdom as we look at it Aquinas writes is considered not only as being cognizant of God as it is with the philosophers, *but also as directing human conduct* since this *is directed not only by the* human law but by the divine law Accordingly the beginning of wisdom as to its essence consists in the first principles of wisdom *i e* the *articles* of faith

and in this sense faith is said to be the beginning of wisdom. But as regards the effect the begin nin of wisdom is the point where wisdom be gins to work and in this way fear is the begin ning of wisdom yet servile fear in one way and filial fear in another

For servile fear Aquinas explains is like a principle disposing a man to wisdom from without in so far as he refrains from sin through fear of punishment and is thus fashioned for the effect of wisdom On the other hand chaste or filial fear is the beginning of wisdom as be ing the first effect of wisdom For since the reg ulation of human conduct by the divine law belongs to wisdom in order to make a begin ning man must first of all fear God and submit himself to Him

The special character of wisdom which we noted earlier—that it is at once speculative and practical knowledge that it is concerned both with the ultimate nature of things and the ulti mate good for man—seems to be strikingly ex emplified in what the theologian calls the gift of wisdom. Wisdom as Plato conceives it may have this double character but for Aristotle as we have seen wisdom as opposed to prudence is purely speculative It remains speculative even when it deals with the end which is the good of each thing and in general with the su preme good in the whole of nature It con siders the end or the good as Aristotle indi cates only under the aspect of investigating the first principles and causes for the good *i e* the end is one of the causes It does not thereby direct man to his own end or lay down the rules of a good life

The supernatural gift of wisdom Aquinas tells us is not merely speculative but also prac tical It belongs to wisdom as a gift not only to contemplate divine things but also to regulate human acts Such infused wisdom not only extends to the hidden mysteries of d vine things which are beyond the greatest w sdom man can acquire by his natural efforts but this wisdom also dire ts man s actions to the sov ereign good which is the last end by knowing which man is said to be truly wise

CHRISTIAN THEOLOGIANS LIKE Augustine and Aquinas do not hold the wisdom of the phi losophers in contempt because they fail to pene trate the divine mysteries, or to guide man to his salvation Augustine finds in Plato s teach ing a marvellous foreshadowing of Christian wisdom It is evident that none come nearer to us than the Platonists he says when he attrib utes to Plato the conception of the wise man as one who imitates knows loves this God and who is rendered blessed through fellowship with Him in His own blessedness Though Aquinas holds that wisdom as a gift is more excellent than wisdom as an intellectual virtue since it attains to God more intimately by a kind of union of the soul with Him he certainly re gards Aristotle as the epitome of natural wis dom when he refers to him as *the* philosopher

The admonition of St Paul, to beware lest any man spoil you through philosophy and vain deceit after the tradition of men after the ru diments of the world does not seem to be in terpreted by Augustine and Aquinas to mean as Montaigne later suggests that the plague of man is the opinion of wisdom and for this reason it is that ignorance is so recommended to us by our religion But the theologians do con demn the counterfeits of wisdom to which men are susceptible These are false wisdoms the wisdom of the philosophers is not false but imperfect

We find three types of false worldly wisdom listed by Aquinas If a man fixes his end in ex ternal earthly things he writes his wisdom is called *earthly* if in the goods of the body it is called *sensual* wisdom if in some excellence it is called *devilish* wisdom becaus it imitates the devil s pride These worldly wisdoms consti tute for him the sin of folly It is the wisdom of the world Aquinas says which deceives and makes us foolish in God s sight Though no man wishes to be a fool he adds yet he wishes those things of which folly is a conse quence *viz* to withdraw his sense f om spiritual things and to plunge it into earthly things The essence of such folly according to the Psalmist lies in denial The fool hath said in his heart There is no God

But there is another meaning of folly in which it is neither a sin nor the opposite of wis dom If any man among you seem to be wise in this world St Paul declares let him be come a fool that he may be wise Commenting on this text Aquinas explains that just as

is an evil wisdom called *worldly wisdom* so too there is a good folly opposed to this evil wisdom whereby man despises worldly things If there is wisdom in such folly so also according to Aquinas there can be wisdom in those whom the world regards as natural fools or innocents If they have grace he writes baptized idiots like little children have the habit of wisdom which is a gift of the Holy Ghost but they have not the act on account of the bodily impediment which hinders the use of reason in them

Throughout the tradition of the great books those who praise folly do not take exception to the Psalmist s remark that only fools despise wisdom Rather they find wisdom in the appearances of folly and use the wisdom of fools to expose the folly of those who pretend to be wise I every day hear fools say things that are not foolish Montaigne declares and echoing him Touchstone the clown in *As You Like It* complains The more pity that fools may not speak wisely what wise men do foolishly To which Celia replies By my troth thou sayest true for since the little wit that fools have was silenced the little foolery that wise men have makes a great show And later after a conversation with Touchstone about the passing of time Jacques observes When I did hear the motley fool thus moral on the time my lungs began to crow like chanticleer that fools should be so deep contemplative

The jesters and clowns in Shakespeare s comedies have a kind of wisdom In *Twelfth Night* the clown who banters with Viola denies that he is the Lady Olivia s fool but says he is simply her corrupter of words The trouble he explains is not that he lacks reason but that words are grown so false that I am loath to prove reason with them and he ends by telling Viola Foolery sir does walk about the orb like the sun it shines everywhere I would be sorry sir but the fool should be as oft with your master as with my mistress I think I saw your wisdom there

Pantagruel persuades Panurge to take counsel of a fool The wise may be instructed by a fool he says You know how by the advice and counsel and prediction of fools many kings princes states and commonwealths have been preserved battles gained and diverse doubts of a most perplexed intricacy resolved As he who is called a worldly wise man Pantagruel goes on to remark may in the second judgment of the intelligences which are above be esteemed a fool so he may be thought a sage who lays quite aside those cares which are conducible to his body or his fortunes All which neglects of sublunary things are vulgarly imputed folly

To the same general effect are Pierre s reflections in *War and Peace* on the period of his blissful insanity after the burning of Moscow When he recalls the views he formed of men and circumstances at the time of his madness he always finds them correct I may have appeared strange and queer then he says to himself but I was not so mad as I seemed On the contrary I was wiser and had more insight than at any other time and understood all that is worth understanding in life because because I was happy

Folly is not always praised in paradox nor is it seriously condemned only by the Christian theologian who equates it with denying or turning away from God Folly eldest of Jove s daughters says Agamemnon in the *Iliad* shuts men s eyes to their destruction She walks delicately not on the solid earth but hovers over the heads of men to make them stumble or to ensnare them Time was when she fooled Jove himself Agamemnon concludes the story of Jove s befuddlement by relating how in his rage Jove caught Folly by the hair and swore a great oath that never should she again invade starry heaven and Olympus for she was the bane of all Then he whirled her round with a twist of his hand and flung her down from heaven so that she fell on the fields of mortal men

On the earthly plane folly takes many forms of which in Montaigne s judgment the most exasperating are dullness of wit the boldness of stupidity and contentiousness in argument Obstinacy of opinion and heat in argument are the surest proofs of folly he observes Is there anything so assured resolute disdainful contemplative serious and grave as the ass?

Whatever the forms or aspects of folly and however the wisdom it implies or opposes be conceived one thing is clear throughout the

tradition of western thought No one who can separate true wisdom from folly in disguise places anything but the highest value on it in the order of human goods

The final utterance of the Chorus in *Antigone* that wisdom is the supreme part of happiness the Aristotelian doctrine that the activity of philosophic wisdom is admittedly the pleasantest of virtuous activities and all the other attributes ascribed to the supremely happy man are evidently those connected with this activity the statement by Plato in his *Seventh Letter* in which he demands that his myth of the philosopher king be taken seriously for the human race will not see better days until either the stock of those who rightly and genuinely follow philosophy acquire political authority or else the class who have political control be led by some dispensation of providence to become real philosophers —all these express the tribute which pagan antiquity pays to wisdom in human life and society

To the Christian—theologian mystic or poet—it is in Heaven with the saints who dwell in God s presence that wisdom like love reigns supreme Nor are these two unconnected As charity is the perfection of the will so wisdom is the perfection of the intellect In the *Divine Comedy* Aquinas explains to Dante when they meet in Paradise how lack of wisdom s order in the mind goes hand in hand with love s disorder He is very low down among the fools the spirit says who affirms or denies without distinction alike in the one and in the other case because it happens that oftentimes the rash judgment bends in false directions and then self love binds the intelligence

With the accent on earth rather than on heaven with reliance upon reason rather than upon faith Spinoza voices a comparable insight that to have wisdom is to love wisely for to know wisely is to love God It is therefore most profitable to us in this life he writes to make perfect the intellect or reason as far as possible and in this one thing consists the highest happiness or blessedness of man for blessedness is nothing but the peace of mind which springs from the intuitive knowledge of God Not only does the highest possible peace of mind arise from this kind of knowledge but he adds from it also necessarily springs the intellectual love of God

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the pa sages referred to For example in **4** HOMER *Iliad* BK II [265 83] **12d** the number **4** is the number of the volume in the set the number **12d** indicates that the pas sage is in section d of page 12

PAGE SECTIONS When the text is printed in one column the letters **a** and **b** refer to the upper and lo er halves of the page For e ample in **53** JAM S *Psy hology* **116a 119b** the passa e begins in the upper half of p ge 116 and ends in the lower half of page 119 When the text is printed in two columns the letters **a** and **b** refer to the upper and lower halves of the left hand side of the page the letters **c** and **d** to the upper and lower halves of the right hand side of the page For example in **7** PLATO *Symposium* **163b 164c** the passage begins in the lower half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S DIVISIONS One o more of the main divisions of a work (such as PART BK, CH SECT) are so netimes included in the reference line numbers in brackets are given in cer tain cases *e g Il ad* BK II [265 283] **12d**

BIBLE RE ERENCES The references are to book chapter and verse When the King James and Dou y versions differ in t tle of books or in the numbering of chapters or verses the King James vers on is cited first and the Douay ind cated by a (*D*) follows *e g* OLD TESTA MENT *Nehemiah* 7 45—(*D*) *II Esd as* 7 46

SY BOL The abbrev ation esp calls the eader s attention to one or more especially relevant parts of a whole refe ence passim signifies that the topic is discussed intermit tently rathe than continuously in the work r p ssage cited

For add tional information concerning the style of the references see the Explanation of Refe ence Style fo ge eral guidance in the use of *The Gre t Ideas* consult the Preface

1 The nature or gins and kinds of wisdom

1*a* Diverse conceptions of natural wisdom the supreme form of hum n knowledge

7 PL TO *Charm d s* **7d 9d 11b c 12d 13d** / *Ph ed s* **125a 126c** / *Symposium* **166c 167c** / *Apology* **201b 203a** / *Ph do* **232a** / *R pub l c* BK IV **346a 347a** K VI VII **383d 398c** / *Timaeus* **476a b** / *Parmen des* **491 d** / *Soph t* **571a** / *Ph lebus* **634b 635b** / *L ws* BK **670b** / *Seventh Letter* **809c 810d**

8 AR TOTLE *Physi* BK H 9 [92 33 b2] **268c d** BK I C I 2 [194b9–15] **271a** 7 [198 22 31] **275b c** / *H avens* BK II CH I [298b13 24] **390a b** / *M taphys s* BK H 2 **499 501** BK CH I **511b d 512b** BK I CH I [995 23 b27] **513b d 514b** C I 2 [996 18 997a34] **514d 516** BK V C I I 3 **522a 525a** BK VI C I **547b d 548c** K XI CH I 4 **587a 590a** H 7 **592b 593a** / *S ul* BK I C [403b10–17] **632d**

9 ARI TOTL *Eth cs* BK VI CH 7 **390a d** CH 13 [1145 7 12] **394d**

11 NICO I C IU *A ithmet* BK I **811a 813a**

12 LUCRETIUS *Nat of Th s* BK V [1–54] **61a d** BK VI [1 42] **80a d**

12 E ICTETUS *D sco es* BK II CH 22 **167d 168a** BK III C I 2 **177c 178d** BK IV CI 5 **228a 230b**

12 AURELIUS *Meditations* BK V SECT 9 **270b c**

16 PTOL IY *Almag t* BK **5a b**

17 PLOTINUS *First Ennead* TR II CH 6 TR III C I 6 9 **12b** / *Fifth Ennead* TR III CH 2 4 **216b 217d**

18 AUGUSTINE *City of God* BK V II CH I 10 **264b d 271d**

19 AQUINAS *Summa Th olog ca* PART I Q I A I **3b 4a** A 6 **6b 7a** A 8 ANS **7c 8d** Q 14 A I REP 2 **75d 76c** Q 79 A 10 REP 3 **423d-424d**

20 AQUIN S *Summa Theologica* PART I II Q 57 A 2 **36a 37b** PART II II Q 9 A 2 ANS **424b 425a** Q 19 A 7 ANS **469d-470c** Q 45 A I A 5 **598d 599d**

23 HOBB S *Le athan* PART I **60c-61a 72a d** ART IV **267a b 269b c**

25 MONTA GNE *Essay* **308c d 520b 522a 522c**

28 H RV Y *On Animal Generatio* **443b**

30 B CON *Advanceme t of Lea ing* **15d 17b-c 40a-48d** esp **40a 41b 43a c 44c 45a** / *Novum O ganum* K II A II 9 **140b c**

31 D CARTES *Rules* I **1a 2** / *Med ta i ns* **70 d**

31 S INOZA *Ethics* PART II PROP 40 SCHOL 2 P O 42 **388a c** P O 47 **390 391a** PART V PRO 25 42 **458d 463d**

35 HUME *Huma Underst ding* S CT I DIV 7 **453c-454a**

37 FIELDIN *Tom J nes* **182 b**

(1 *The nature origins and kinds of wisdom 1d The wisdom of God the defect of human wisdom compared with divine wisdom the folly or vanity of worldly wisdom*)

esp 1 12 18 12 26 3 11 6 8 7 16–17 7 23 25 8 16–17 11 5 12 8 12 / *Isaiah* 29 14 16 33 18 19 40 12 31 esp 40 28 44 24 25—(*D*) *Isaias* 29 14 16 33 18 19 40 12 31 esp 40 8 44 24– 5 / *Jeremiah* 8 8–9 9 23 24 10 7 8 12 15 51 15 18—(*D*) *Jeremias* 8 8 9 9 23 24 10 7 8 12 15 51 15 18 / *Ezekiel* 28 1 7—(*D*) *Ezechiel* 8 1 7 / *Daniel* 2 20–23

APOCRYPHA *Wisdom of Solomon* 7 15 16 8 1 4 9 1 4 13 17 17 7 8—(*D*) OT *Book of Wisdom* 7 15 16 8 1 4 9 1 4 13 17 17 7–8 / *Ecclesiasticus* 1 1 10 3 20– 5 11 15 15 18 19 19 24 5 21 1 23 19 20 24 1–9 24 29 37 19– 1 39 19–20 42 17 25—(*D*) OT *Ecclesiasticus* 1 1 10 3 21 6 11 15 15 19–20 19 1 2 21 14 15 23 2, 29 24 1 14 35 39 37 22 24 39 4 25 42 17 26

NEW TESTAMENT *Matthew* 11 16–19 / *Luke* 7 31 35 16 8 / *John* 1 1 4 5 9 / *Romans* 11 33 36 / *I Corinthians* 1 7 2 16 3 16–20 8 1 3 / *Colossians* 2 2 3 8 / *James* 3 3 18

5 AESCHYLUS *Suppliant Maidens* [86–103] 2a b

5 EURIPIDES *Bacchantes* [386–433] 343a b / *Iphigenia Among the Tauri* [570 575] 416a

7 PLATO *Apology* 203a

8 ARISTOTLE *Metaphysics* BK I C 1 2 [982b28 983 11] 501a b BK XII CH 7 [1072b13 29] 602d 603a CH 9 605a d 1 1 [1075b20 24] 606c

9 ARISTOTLE *Ethics* BK X CH 8 [178b20–23] 433b c / *Politics* K VI C 1 [1323b2 25] 527

12 EPICTETUS *Discourses* BK I CH 4 120d 121c

17 PLOTINUS *Fourth Ennead* TR IV CH 11 13 163c 165b / *Fifth Ennead* TR VIII CH 4–6 241b 242d

18 AUGUSTINE *Confessions* K I I par 8 14d 15a BK V par 5 28b c BK XII pa 20 103c d / *City of God* BK X CH 22 296d 297a BK XI 1 328 d / *Christian Doctrine* K CH 8 14 626 628b

19 AQUINAS *Summa Theologica* T I Q A 6 ANS and REP 1 6b 7a Q 3 A 6 REP 1 18c 19 Q 4 A 2 R P 3 21b 22b Q 14 A 1 REP 75d 76c Q 15 A 2 REP 2 92a 93b Q 2 2 ANS 125c d A 4 ANS and REP 4 126c 127c Q 27 A EP 2 154c 155b Q 34 A R P 4 185b 187b Q 39 A 8 210a 213a Q 44 3 ANS 240b 241 Q 45 A 6 R P 2 3 247a 248b Q 47 A 1 ANS 256a 257b 2 ANS 257b 258c Q 62 A 6 AN 322a d Q 65 A 2 R 3 340b 341b

20 AQUINAS *Summa Theologica* PART I I Q 5 A 1 RE 2 12b 13c Q 91 A 3 REP 209d 210c PART II II Q 45 A 1 REP 1 598d 599d A 4 RE 1 601a-c A 6 REP 2 602b 603 2 46 603c 605a c passim esp A 1 REP 2 3 603c 604b A 3 REP 2 604d 605a c PART III Q 12, A 2 CONTRARY and R P 3 777b 778b A 3, REP 2 778b 779a

25 MONTAIGNE *Essays* 212a 215a 238c 239c 251c 252b

30 BACON *Advancement of Learning* 17b-c 19b c 98d 99b

32 MILTON *Paradise Lost* BK II [188 193] 115b BK VII [109 130] 219b 220a BK VIII [179 214] 236a b BK XII [561–573] 331b

33 PASCAL *Pensees* 4 5–555 243b 270a

35 LOCKE *Human Understanding* BK II CH XXIII SECT 34 213a b BK III CH VI SECT 11 271c SECT 12 272b BK IV CH X SECT 5–6 350a-c

35 BERKELEY *Human Knowledge* SECT 32 418d 419a

37 FIELDING *Tom Jones* 182b c 379c 380a

42 KANT *Pure Reason* 24 a b / *Practical Reason* 303b 304b 324b 325a 344a-c 346a-c 354d 355d / *Judgement* 592a c

43 MILL *Utilitarianism* 455b

46 HEGEL *Philosophy of Right* ADDITIONS 164 144c d / *Philosophy of History* INTRO 158c 160b

48 MELVILLE *Moby Dick* 313b 314a

52 DOSTOEVSKY *Brothers Karamazov* BK V 130b c

2 Wisdom virtue and happiness

2a Wisdom as an intellectual virtue its relation to other intellectual virtues especially science and understanding the vice or sin of folly

OLD TESTAMENT *Psalms* 14 1 4 53 1 4—(*D*) *Psalms* 13 1 4 52 1 4 / *Proverbs* 8 12 10 14 12 15 16 14 8 33 15 2 16 21 23 1 24 18 5 21 11 24 9 / *Ecclesiastes* 2 13 4 5 7 4 7 25 26 8 5 9 13 18 10 1 3 12 15 / *Jeremiah* 8 8–9—(*D*) *Jeremias* 8 8–9

APOCRYPHA *Wisdom of Solomon* 7 15 22 8 5 8 12 23 14 31 esp 13 1 2 14 11 4 14 22—(*D*) OT *Book of Wisdom* 7 15 22 8 5–8 12 23 4 31 esp 13 1 2 14 11 14 14 22 / *Ecclesiasticus* 1 4 0 25 10 1 3 18 28–29 21 19 22 7–8 11 15 33 5 34 1 38 24 25 39 3—(*D*) OT *Ecclesiasticus* 1 4 24 31 1 1 3 18 8 29 21 14 22 22 7 18 33 5 34 1 38 25 26 39 1 3

NEW TESTAMENT *Matthew* 7 6– 7 / *Romans* 1 18 5

4 HOMER *Iliad* BK XIX [74 144] 137d 138c

7 PLATO *Cratylus* 86 d / *Republic* BK IV 346a 355a esp 346c 347a 353d 354b BK VI VI 383b 398c K IX 423c d / *Laws* BK III 670b c

8 ARISTOTLE *Topics* BK V CH 6 [136b7 14] 188b c CH 8 [138 37 b5] 191a BK VI CH 6 [145 27 32] 199a

9 ARISTOTLE *Ethics* K I CH 4 [1095b10–13] 340c d CH 13 [1103 3 10] 348c d BK I CH 3 [1139b14 18] 388b CH 6–11 389d 393b

11 NICOMACHUS *Arithmetic* BK I 811a 813a
12 EPICTETUS *Discourses* BK II CH 15 156a b
17 PLOTINUS *Fourth Ennead* TR IV CH 12 164b / *Fifth Ennead* TR VIII CH 4-6 241b 242d
18 AUGUSTINE *Confessions* BK VII par 14 48a b / *City of God* BK VIII CH 10 271b c BK XIV CH 28 397a d BK XIX CH 0 523d 524a
19 AQUINAS *Summa Theologica* PART I Q 14 A I REP 2 75d 76c Q 79 A 9 ANS 422b-423d A 10 REP 3 423d-424d PART I II Q A I RE I 2 615d 616c
20 AQUINAS *Summa Theologica* PART I II Q 57 A 2 36a 37b Q 66 A 5 79b 80c PART II II Q 9 A ANS 424b-425a Q 45 A I ANS and R 2 598d 599d A 2 ANS and REP 3 599d 600 A 3 ANS and REP I 600c-601a A 4 REP I 2 601a-c Q 46 603c 605a c
23 HOBBES *Leviathan* PART I 56d 60c d
25 MONTAIGNE *Essays* 521d 522a
31 DESCARTES *Rules* I 1a 2a
32 MILTON *Paradise Lost* BK VII [109-130] 219b-220a / *Areopagitica* 392b
42 KANT *Fund Prin Metaphysic of Morals* 260d 261d / *Practical Reason* 337a 338c 360d 361d

2b Wisdom and man s knowledge of good and evil the relation of wisdom to the moral virtues

OLD TESTAMENT *Genesis* 3 / *I Kings* 3 5-14—(D) *III Kings* 3 5 14 / *II Chronicles* 1 7 12—(D) *II Paralipomenon* 1 7 12 / *Job* 28 28 / *Psalms* 14 1 4 37 30 53—(D) *Psalms* 13 1 4 36 30 52 / *Proverbs* 2 3 5-7 2 24 5 22-23 6 6-8 32 33 7 4 5 8 9 9-18 10 8 19 3 31 1 2 12 16 13 1 14 19 14 8-9 16-18 29 15 1,24 33 17 10 18 6-7 19 3 24 9 28 7 29 3 / *Ecclesiastes* 2 26 7 9-10 25-26 8 5 10 2 15
APOCRYPHA *Wisdom of Solomon* passim esp 1 1-7 6 12 5 7 22 30 8 5 7 9 9-18 0 8 10 1 23 24 13 1-2 4 14 14 22-3 —(D) OT *Book of Wisdom* passim esp 1 -7 6 3 27 7 1 3 8 5 7 9 9- 9 1 8 10 23 24 13 1 2 14 11 14 14 22 31 / *Ecclesiasticus* 1 4 1 14 1 26-27 11 5 16 17 1 7 18 27 19 18 5 - 11 12,22 6 2 10-18 23 2-3 27 1 13 39 1 43 33 45 6 47 2 20 50 28 29—(D) OT *Ecclesiasticus* 1 4 0 16-27 1 15 16 7 6 18 27 19 8-22 21 12 15 25 29 22 19 22 23 2 3 27 2 14 39 -15 43 37 45 3 47 14 2 50 30-31
NEW TESTAMENT *Matthew* 7 26- 7 / *Romans* 1 18 5 16 9 / *Philippians* 1 9-11 / *Colossians* 1 9-10 / *James* 3 3 8
5 AESCHYLUS *Agamemnon* [60- 83] 53d 54a
5 SOPHOCLES *Antigone* [348 1353] 14 d
6 THUCYDIDES *Peloponnesian War* BK I 370a c
7 PLATO *Charmides* 7a 13 passim esp 7b 12d 13a / *Laches* 31a b 33a 37a / *Protagoras* 56b 58a 64d esp 62a 64a / *Euthydemus* 69a 71a / *Cratylus* 86c d / *Symposium* 166c 167d / *Meno* 183c 184c 189b d / *Phaedo* 226a b 230d 234c esp 232a b 233d 234c / *Republic* BK I 306c 308a BK III 337b d BK IV 346a 355a BK VI VII 383d 398c / *Critias* 485b-c / *Theaetetus* 530b 531a / *Philebus* 635c 639a c / *Laws* BK I 643c d BK III 669b 671b BK XII 795c 796b / *Seventh Letter* 801b-c 806b c 808c d
8 ARISTOTLE *Sophistical Refutations* CH 24 [180 7 15] 248a / *Metaphysics* BK I CH 2 [982b4 10] 500d BK III CH 2 [996a21 b13] 514d 515a
9 ARISTOTLE *Ethics* BK VI CH 5 389a d CH 12 13 393b 394d BK X CH 8 [1178 16-18] 432d / *Politics* BK VII CH 1 [1323b21 36] 527c d
12 EPICTETUS *Discourses* BK II CH 2 167d 168 BK III CH 177c 178d BK IV CH 5 228a 230b
14 PLUTARCH *Demetrius* 726a d
17 PLOTINUS *First Ennead* TR II CH 6-7 9a 10a TR III CH 6 11d 12b
18 AUGUSTINE *City of God* BK XIX CH 20 523d 524a
19 AQUINAS *Summa Theologica* PART I Q I A 6 REP 3 6b 7a Q 64 A I AN 334a 335c Q 79 A 10 REP 3 423d-424d PART I I Q 2 A I REP I 615d 616 A 2 REP 3 616d 617b
20 AQUINAS *Summa Theologica* PART I II Q 57 A 4 ANS 38a 39a A 5 ANS 39a-40a Q 58 A 4 ANS 44 d PART II-I Q 19 A 7 ANS 469d 470 Q 45 598c-603c esp AA 3 4 600 601c Q 46 A 2 ANS 604b-d A 3 604d 605 c
23 HOBBES *Leviathan* PART II 112a b
25 MONTAIGNE *Essays* 59c 60a 70d 72a 478c 480c
27 SHAKESPEARE *All's Well That Ends Well* ACT I SC I [109-116] 143c / *Macbeth* ACT III SC I [48-54] 295b ACT IV SC II [1-17] 302b-c
31 DESCARTES *Discourse* PART II 49d 50b
31 SPINOZA *Ethics* PART V PROP 4 463b d
32 MILTON *Comus* [331-489] 40b 44a esp [375-385] 41b-42a / *Paradise Lost* BK VIII [316-337] 239a b BK IX [679-779] 262a 264a BK XI [84-98] 301a / *Samson Agonistes* [38 59] 340b
33 PASCAL *Pensées* 46 254b
35 LOCKE *Human Understanding* BK CH III SECT 16 117a
37 FIELDING *Tom Jones* 31c d 182a-c
38 ROUSSEAU *Inequality* 344d 345c
42 KANT *Fund Prin Metaphysic of Morals* 256a b / *Practical Reason* 337a 338 360d 361d / *Pref Metaphysical Elements of Ethics* 365b [fn 1] 368b 369a 377b c
46 HEGEL *Philosophy of History* PART I 279d 281
51 TOLSTOY *War and Peace* BK V 194b 195a 197b BK II 335a
52 DOSTOEVSKY *Brothers Karamazov* BK V 120b 121d

(2 *W sdom 1irtue and happ n ss*)

2c Wisdom as a good its role in the happy l fe the place of the wise man in society

OLD TESTA IENT *Genesis* 41 33 37–45 / *Exodus* 18 21 26 / *D ut ronom}* 1 13 / *I Kings* 3 5 28 4 29 34 10 1 10—(*D*) *III Kings* 3 5 8 4 29–34 10 1 10 / *II Chron les* 1 7 12 9 1 9 —(*D*) *II P ralipomen n* 1 7 12 9 1 9 / *Job* 28 12 20 / *Psalms* 90 12—(*D*) *P alms* 89 12 / *Proverbs* 1 1 5 8–9 10 1 12 8 14 1 3 24 35 15 20 4 16 16 20 22 17 2 16 21 25 19 2 8 13 20 20 15 26 21 20–22 2 17 21 23 15–16 19–25 24 1 14 26 1 8 27 11 28 2 6 29 8 / *Ecclesiastes* 1 17 18 2 12 26 6 8 7 5 1–1 16–19 8 1 5 9 11 18 10 1–6 12 8 12—(*D*) *Eccles astes* 1 17 8 2 12 26 6 8 7 6 12 13 17 0 8 1 5 9 11 18 10 –6 1 8 1 / *E ekiel* 8 2 7—(*D*) *Ezechiel* 28 2 7 / *D el*—(*D*) *Daniel* 1 1 3 23 3 91 12 13

APOCRY HA *T bit* 4 18—(*D*) OT *Tobias* 4 19 / *W sdom of Solom n* passim esp 3 11 15 4 8–9 6 12 25 7 7 10 21—(*D*) OT *Book of W dom* passim esp 3 1 15 4 8 9 6 13 27 7 7 10 1 / *Ecclesiasticus* 1 16–19 4 11 19 23 24 6 18 37 7 5 19 8 8–9 9 14 5 17 0 1 4 25 11 1 14 20 15 10 19 8 18 20 13 29–31 21 12–13 15 17 1 24 26 22 16–17 24 1–2 25 4–5 1 26 14 27 12 34 8 37 19– 6 38 24 39 11 40 20 25 4 14 15 44 1 15 47 13 7 51 3 28—(*D*) OT *E clesiastici* 1 20–24 4 12 22 28 29 6 18 37 7 5 21 8 9– 2 9 2 2 24 10 1 4 28 11 14 2 5 10 19 8 18 0 13 31 33 2 14 16 18 20 24 27 29 22 19–2 24 1 3 25 6 7 13 26 18 27 13 34 8 37 21 29 38 5 39 15 4 25 41 17 8 44 1 15 47 15 18 51 18–36 / *Su an a*—(*D*) OT *Da iel* 13 / *Bel and D ag n*—(*D*) OT *Dan l* 14

NEW TESTAM NT *Luk* 11 31 / *J mes* 3 13 18

4 HO ER *Iliad* K XI [618–644] 78d 79a

5 SOPHO LES *Oed pu the King* [1 57] 99a d [300–462] 102 103c / *A tigone* [632 765] 136c 137d [1348 353] 142d / *Aj x* [1226–1263] 153c 154a

5 EURIP DES *Med* [292 305] 214c d / *Bacchantes* [386–433] 343a b

6 H RODOTUS *History* BK I 6c 8 K VIII 280a b

6 THUCYDI ES *Pelopo nes an W a* BK I 370a c 383d 384a BK I 402a–404d

7 PL TO *Charmides* 13b d / *Laches* 33a 34b / *P otag as* 44a 45b / *Euthydemu* 69a 71a 76a 83c 84a / *Sympo ium* 167 d / *Meno* 183c 184c / *Apol gy* 207a 208 / *Pha do* 226a b 233c 234c / *Gorg as* 272b 273b 291c 292b / *R publ c* BK 346a 356a passim esp 346a 347a 354d 355a BK V II 368c 401d / *T maei s* 476a b / *Theaet tus* 525c 526a 528c 531a / *St t sman* 598b 608d / *Ph l bus* 609a–639a c esp 635c 639a c / *Laws* BK I 643c d K 655b 656a BK I 669b 671b BK V 688d BK XII 796b d / *Seventh Letter* 801b 802c 803c 804b 806b-c 808c 809a

8 ARISTOTLE *Metaphysi s* BK I CH I [981ᵇ13 24] 500a c I – 500b 501c BK XII CH 7 [10,2ᵇ 13 29] 602d 603a

9 ARISTOTLE *Ethics* BK I CH 5 [1095ᵇ13 109ᶠ 4] 340d 341a CH 8 [1098ᵇ19–32] 344a b BK VI CH 7 [1141 18 ᵇ7] 390a c CH 8 390d 391c CH 12 [1143ᵇ17 1144 6] 393b-c BK VII CH 12 [1152ᵇ33–1153 8] 404a b BK X CH 2 [1172ᵇ26–32] 426d 427a CH 7 8 431d-434a / *Poli cs* BK VII CH 1 [1323ᵇ21–36] 527c d CH 2 [13] 23 35] 528b CH 3 [1325ᵇ14 32] 529d 530a

11 NICOMACHUS *Arithmetic* BK I 811d

12 LUCRETIUS *Nature of Things* BK II [1–61] 15a d BK V [1 54] 61a d [1113 1135] 7 c d BK VI [1–42] 80a d

12 EPICTETUS *Di cour es* BK III CH 22 195a 201a

12 AURELIUS *M ditations* BK II SECT 17 259b d BK V SECT 9 270b c

13 VIRGIL *Geo gics* II [490–493] 65b

14 PL TARCH *Lycurgus* 47a 48c / *Numa Pompilius* 59c 60b / *Solon* 64b d 77a c esp 68b d / *Pericles* 122d 123c / *Alexander* 543b 544a 566a 567d / *Cato the You ger* 637b c / *Ci ero* 717a b / *Dion* 782c 788b

15 TACITUS *Annal* BK IV 72a BK VI 91c BK XIV 153d 155a BK XV 172c 173d

17 PLOTINUS *First En ead* TR II CH 7 9d 10a TR IV CH 4 16 14a 19b

18 AUGUST NE *Confessions* BK III par 7 14 d / *City f God* BK VIII CH 5 267d CH 8 270c

19 AQUINAS *Summa The logica* PART I II Q 2 A I R 615d 616c Q 3 A 5–6 626b 628a

20 AQUIN S *Summa Theolog a* P RT I II Q 66 A 5 REP I – 79b 80c PART II II Q 19 A AN 469d 470 Q 45 A 2 REP 2 599d 600c A 3 REP 3 600c 601a AA 4 6 601a 603c

21 DANTE *Di n Comed* I ELL IV 5c 7a URGATORY III [16–45] 56a b

22 CHAUCER *Prologue* [285 308] 164a b / *Tale f Mel b us* par 12 13 404a 405a pa I 407a b par 20 21 409a b par 29 412b 413a

23 HO ES *Lev than* ART II 164a c

24 RABELAIS *Gargantua and Pantagruel* BK III 127b d 129a

25 MONTAIGNE *Essays* 55d 62a 69d 72a 126b 127c 150 151a 231d 242d p ssim 308c d

26 S I KESPEAR *Rich d II* ACT III SC II [178 185] 337b / *1st Henry IV* ACT I SC I [89–1 0] 436b c

27 S AKESPEAR *All s Well That E ds Well* ACT SC I [109 116] 143c

29 CERV NTES *D n Qu xote* PART I 185c PA T II 332b 333b 340d 343a esp 341c 353b 356d 361 d

30 BACON *Adva cement of Learn ng* 5a b 20b-26a 27 30a c

31 DE C RTES *Rul s* I 1a 2a / *Meditati ns* III, 88d 89a

(3 *The love of wisdom and the steps to wisdom the sophist the philosopher and the wise man*)

43 MILL *Liberty* 276b 277a

46 HEGEL *Philosophy of Right* PREF 4b 5c / *Philosophy of History* PART II 271d 272a 279d 281a

47 GOETHE *Faust* PART I [354 601] 11a 16b [1011 1125] 25b 28a

4 The praise of folly the wisdom of fools and innocents

OLD TESTAMENT *Psalms* 8 2 131—(D) *Psalms* 8 3 130 / *Ecclesiastes* 1 17 18 4 13

APOCRYPHA *Ecclesiasticus* 19 24—(D) OT *Ecclesiasticus* 19 21

NEW TESTAMENT *Matthew* 11 25 26 18 1 4 21 5 16 / *Mark* 10 13 15 / *Luke* 10 21 / *I Corinthians* 1 17 2 16 3 18 20 4 10 / *II Corinthians* 1 12 / *I Peter* 2 1 2

5 EURIPIDES *Bacchantes* [386–433] 343a b

18 AUGUSTINE *Christian Doctrine* BK I CH II 12 627b d c I 14 627d 628b

20 AQUINAS *Summa Theologica* PART II-II Q 45 A 5 REP 3 601c 602b Q 46 A I REP 2 603c 604b

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25 MONTAIGNE *Essays* 150 151a 231d 24 esp 233b 235b c 238c d 499d 500a 50 504c 508a 512a 520b d

26 SHAKESPEARE *Love's Labour's Lost* ACT SC II [68 74] 274d / *As You Like It* ACT SC II [92–96] 599d 600a ACT II SC VII [12– 607b d

27 SHAKESPEARE *Twelfth Night* ACT I SC [I 146] 4b 5d ACT III SC I [1–75] 14a d A IV SC I [I 24] 21c d SC II [76–113] 23 *King Lear* 244a 283a c esp ACT I SC IV [I 345] 251b 253c SC V 254a c ACT II SC [1–1 8] 258b-259d ACT III SC VI [1–91] 26 267c

29 CERVANTES *Don Quixote* PART I 19 PART II 334d 336a 340d 343a esp 341c d

32 MILTON *Paradise Lost* BK XII [561–573] 33

33 PASCAL *Pensées* 2,1 222a 327 231a b

42 KANT *Fund Prin Metaphysic of Mor* 261c d

47 GOETHE *Faust* PRELUDE [85–88] 3a

48 MELVILLE *Moby Dick*, 307a 380a 38 385b

51 TOLSTOY *War and Peace* BK XII 559d BK 643a b

52 DOSTOEVSKY *Brothers Karamazov* BK V 121d

CROSS REFERENCES

For Other discussions of the distinction between speculative and practical wisdom or between wisdom and prudence *see* PHILOSOPHY 2a PRUDENCE 2a THEOLOGY 3b

The relation of wisdom to other intellectual virtues *see* SCIENCE 1a(1) VIRTUE AND VICE 2a(2)

Various conceptions of the supreme form of human knowledge *see* DIALECTIC 2a METAPHYSICS 1

The relation of philosophical to theological wisdom *see* KNOWLEDGE 6c(5) PHILOSOPHY 1a THEOLOGY 2 4a

Comparisons of divine and human wisdom *see* KNOWLEDGE 7a TRUTH 2d

Other discussions of the knowledge of good and evil and of the relation of knowledge to virtue *see* GOOD AND EVIL 6a KNOWLEDGE 8b(1) VIRTUE AND VICE 1a and for the relation of wisdom to happiness *see* HAPPINESS 2b(7) PHILOSOPHY 4a

The conception of the philosopher king or of the place of the wise man in society *see* MONARCHY 2b PHILOSOPHY 4c STATE 8b

The conception of philosophy as the love of wisdom and for the distinction between the sophist the philosopher and the wise man *see* PHILOSOPHY 6a–6b TRUTH 8e

ADDITIONAL READINGS

Listed below are works not incl ded in *Great Books f he W e tern World* but relevant to the idea and topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collection
II Works by authors not represented in this collection

For the date place and othe facts concerning the publication of the works cited consult the Biblio aphy of Additional Readings which follows the last chapter of *The Great Ideas*

I

A GUSTINE *Divine Providen e and the Problem of Evil*
— *On the Trin ty* BK XIII
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— *S mma Theolog ca* PART II–II QQ 176–177
F B CON *Th W d m of the Ancients*
— Of Wisdom for a Man s Self, Of Seeming Wise in *E says*

II

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MAIMONI ES *Th Guide for the Perplexed* PART III CH 54
BONAVENTURA *On the Reduct on of the Arts to Theology*
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SU R Z *Disputationes Metaphysicae* I (5)
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R BROWNIN *Rabb Ben Ezr*
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MANN *The Magic Mountain*
WHITEHEAD *Adve tur s of Ideas* CH 4
MAR TAIN *The D gr es of Knowl dge* CH 6–7
— *Science and Wisdom* pp 3–33

Chapter 102 WORLD

INTRODUCTION

HE who does not know what the world is writes Marcus Aurelius does not know where he is And he who does not know for what purpose the world exists does not know who he is nor what the world is According to the Stoic emperor for whom there is one universe made up of all things and one God who pervades all things man has only to exercise the divine spark of reason in himself in order to be at home in a world which reason rules

He does not hesitate long before the dilemma that it is either a well arranged universe or a chaos huddled together In the belief that it is through and through an orderly world—a cosmos rather than a chaos governed by providence rather than by chance—Aurelius is willing to assume whatever place destiny allots him in the universal scheme Everything harmonizes with me he says which is harmonious to thee O Universe

With a Christian s faith in God s plan and providence Montaigne is also willing to conceive the universe as the stage on which man acts his destined part But suppose Montaigne adds that we consider man alone without foreign assistance armed only with his own proper arms and unfurnished with the divine grace and wisdom which is all his honor strength and the foundation of his being How then does the world appear? Is it in all its vastness the human habitat—the home of man its lord and master?

Man deceives himself Montaigne thinks if he thus pictures the world in term of h s own reason and knowledge What could lead him to bel eve he asks that this adm rable movement of the celestial arch the eternal light of those planets and stars that roll so proudly over his head the fearful motions of that infinite ocean were established and continue so many ages for his service and convenience? Can anythin be imagined so ridiculous as that this miserable and wretched creature who is not so much as master of himself should call himself master and emperor of the world?

If as Montaigne thinks he should man feels and sees himself lodged here in the dirt and filth of the world nailed and riveted to the worst and deadest part of the universe in the lowest story of the house and most remote from the heavenly arch how absurd for him to imagine himself above the circle of the moon and bringing heaven under his feet Except by the vanity of the same imagination by which he equals himself to God how can he regard himself as occupying an exalted position in the universe?

Deprived of the religious faith that he is made in God s image and that all the rest of the visible universe is made for him only presumption or conceit can save man from being dwarfed by the world But science robs man of such conceit according to Freud The cosmology that is associated in our minds with the name of Copernicus displaces man and shrinks him Humanity cannot hold on to its naive self love Freud writes when it realizes that the earth is not the center of the universe but only a tiny speck in a world system of a magnitude hardly conceivable

NOT ONLY IN THE REFLECTIONS of Aurelius, Montaigne and Freud but throughout the tradition of the great books the conception of the world or universe is inseparable from the ideas of God and man These three ideas always interpenetrate each other though the resulting pattern of thought varies according to the direction in which thought moves from any one of the three to the other two

Sometimes the whole universe lies on one

side of the infinite distance between the Creator and His creation and man has a special place of honor in the hierarchy of beings which con stitutes the order of the created world Though man is greater than the earth he treads or the skies he watches the whole world is less than God Who has made it out of nothing and Who in the freedom of His act of creation is unaf fected by the world s coming to be or passing away On this view taken by Christian theo logians, God is not part of the world the world is not part of God nor is there any whole which embraces both and if world means the phys ical totality then man belongs both to this world and to another—the realm of spiritual creatures which is also part of the created uni verse.

Sometimes world means the all embracing universe uncreated and co eternal with the di inity which dwells in it a thing of soul as well as body including mind as well as matter Whether God is the prime mover of the uni verse the transcendent One from which ema nates in all degrees of being the multiplicity of intelligible and sensible things the infinite substance which exceeds the sum of all the finite things that exist only as its modifications or the Absolute Spirit which manifests itself historically in both physical and psychical na ture—on any of these views cosmology merges with th ology as in the theories of Aristotle Plotinus Spinoza and Hegel For Spinoza and Hegel as for the Stoics to know the world is to know God Its order or structure is more than divinely instituted It is the indwelling divinity itself.

Such views of the world tend for the most part to look upon the individual man as a microcosm mirroring the ma rocosm The world s body and soul, its matter and mind are there to be seen in miniature Considering the philosophers who assert that mind is the king of heaven and earth Socrates suggests in the *Philebus that* in reality they are magnifying themsel es Nevertheless the doctrine of a world-soul animating the body of the universe is repeatedly proposed in the dialogues of Plato as a way of understanding man and that mad or at least cryptic Platonist Captain Ahab gazing on th gold doubloon he has na led to the mast as a rewa d for sighting Moby Dick observes in soliloquy that this round gold is but the image of the rounder globe which like a magician s glass to each and every man in turn but mirrors back his own mysterious self

A third alternative remains Sometimes as with Lucretius and later philosophers of a ma terialist cast the world is all there is and all there is of it can be reduced to atoms and the void It is thrown together by blind chance rather than designed by a presiding intelligence The universe obeys no laws except the laws of its own matter in motion Rid of its haughty lords nature according to Lucretius is seen to do all things spontaneously of herself without the meddling of the gods For their own happi ness Lucretius exiles his papier maché gods to the interspaces where they lead a life without care But man is not so fortunate

In a world that is not made for him and in which godless he must be entirely self reliant man is burdened with heavy cares Since he is one of nature s progeny he may not be wholly alien in this world of material forces but neither is he like a beloved son assured of nature s hospitality The dominant note here is that of man *against* the world and in this unequal struggle science alone gives him the sense—or perhaps the illusion—that at least in his little corner of the world his mind may dominate Yet from time to time defeat reminds him that the world remains unruly Bridle its matter and harness its energies as he will he holds no check rein to prevent hi being overthrown

AS THE CHAPTER ON NATURE indicates the word nature in one of its meanings seems to be synonymous with world " This fact as well as the various ways in which world has been used in the foregoing dis ussion requires us to note a certain ambiguity When we speak of the world our meaning may range from the earth or globe wh ch man inhabits to the *solar system* in which our planet revolves and beyond that to the whole physical universe however far flung We also use world to signify an entire realm of things which is distinctively set ap rt from another order of existence as when we speak of material and sp ritual worlds or when we refer to the world of thought or the world of ense Such phrases as world gov rnment and world peace use world in a political sense

which evokes the image of the whole order of human society upon this globe

We shall restrict ourselves in this chapter to that sense of world in which it signifies the object of cosmological speculations and con troversies We are concerned with the idea of the universe or cosmos As we have already ob- served the universe may be quite differently conceived according to the way in which it is related to God but it is almost always con ceived as that totality in which man and his earth and solar system exist and outside of which nothing can exist except God According to the theologians the angelic hierarchies are no exception for they fall within the created universe But philosophers like Plato and Ploti nus who identify the world with the physical universe set apart from it the eternal ideas or the order of the pure intelligences

The traditional issues concerning the world or universe so understood can be summarized by three basic questions Are there many worlds or is there only one? What is the struc ture of the world? Does the world have a be ginning and does it have an end?

The first of these questions seems to violate the meaning of world as *the* universe—the complete totality of things How can there be more than one *all*? But that difficulty as we shall see may be avoided by the hypothesis of a plurality of worlds succeeding one another in infinite time It may even be met by the sup position that the infinity of space permits the possibility of two or more coexistent but un related worlds Considerations of the time and space of the world amplified in the chapters on SPACE and TIME have a bearing on this issue of one or many worlds

The second question presupposes agreement that the world has a structure for if it does not no problem arises concerning what that struc ture is Such agreement is present in the tra dition and is unaffected by the dispute over the role of chance or des gn in the world s produc tion and by the controversy concerning the world s creation As Harvey points out the Greek word cosmos connotes order and beauty Its opposite is chaos.

Writers may disagree about an original chaos prior to the formation of the cosmos Plato for example refers to a time when the elements were all without reason and measure — be fore they were arranged so as to form a uni verse Milton also writes of a time whe yet this world was not and *Chaos* wilde reign where these Heav ns now rowl In the dar illimitable Ocean without bound —before the Heav ns and Earth rose out of *Chaos* — eldest Night and *Chaos* Ancestors of Nature held eternal *Anarchie* In contrast Aristotle maintains that chaos or Night did not exist for an infinite time prior to the world and he argues against the theologians who generate the world from Night

But these differences of opinion leave the main point unaffected The world is a cosmos not a chaos The universe has some order Even those who doubt the perfection of its order or who point out how it is marred by evil and irrationality affirm an order or structure ac cording to which the universe hangs together and is in some degree intelligible to man The disputed question of the world s structure therefore centers on what the structure is. What precisely is the principle or pattern of cosmic coherence? By what image or analogy shall man try to hold the world before his mind as if it were a single intelligible object?

This problem as well as the issue concerning one or many worlds cannot be completely dis- cussed apart from the last of the three questions —the question of the world s beginning and end For example if world follows world in succes sion each must have a beginning and an end So too the world s structure takes on a differ ent aspect for those who affirm and those who deny its creation by a divine intelligence and according to at least one view of the order in the universe men are persuaded that it must be made or ruled by reason and argue against its being the result of chance

But the question of the world s beginning must not be confused with the issue of creation or the problem of the world s relation to God. Aquinas may agree with Berkeley s criticism of the ancient philosophers who maintained the being of a God while holding Matter to be uncreated and co eternal with Him but he does not wholly agree with Hobbes that to say the world was not Created but Eternal (seeing that which is Eternal has no cause) is to deny there is a God For Aquinas to deny cre-

ation is to deny God but whether the created world ever began to be is a question for faith not reason Nor does the denial of creation necessarily imply the eternity of the world—at least not in the sense in which Lucretius imagines the world to have both a beginning and an end.

TWO GREAT EXPONENTS of atomism in the tradition of the great books—Lucretius and Newton—*show us that agreement on some of the* basic questions of cosmology does not preclude disagreement on others Both conceive the world as built of indestructible atomic particles They conceive its structure to be determined by the motions of its parts both large and small through the forces exerted by body upon body *Both furthermore favor the hy*pothesis of a plurality of worlds but only Lucretius holds that this world had a chance beginning and will come to a similar end

When Lucretius refers to the infinite universe which bounded in no direction spreads out free from limit he does not mean this world *in which man now lives He means* the void in which our world as well as other worlds are formed out of the infinite number of atoms which combining and separating cause the birth and death of worlds In no wise can it be deemed probable he writes when space yawns illimitable towards all points and seeds in number numberless and sum unfathomable fly about in manifold ways driven on in ceaseless motion that this single earth and heaven have been brought into being that those bodies of matter so many in number do nothing outside them

The existence of other worlds than this seems probable to him not only because of the infinity of the universe in respect to its space and matter but also because the atoms form each world without purpose without foresight without result As chance produced this world so it can produce others Hence Lucretius argues you must admit that there are elsewhere other combinations of matter like to this which ether holds in its greedy grasp You must admit that in other parts of space there are other earths and various races of men and kinds of wild beasts Moreover in the sum of all there is no one thing which is begotten single in its kind On this principle he thinks you must admit that earth and sun moon sea and all things else are not single in their kind but rather in number past numbering

By calling the atoms eternal bodies and first beginnings Lucretius indicates that it is each particular world not the universe of matter and the void which has a beginning and an end The atoms or first beginnings fall into arrangements such as those out of which this our sum of things has been formed he explains not by design but because many in number and shifting about in many ways throughout the universe they are driven and tormented by blows during infinite time past Thus a world is born and so even does it grow by the addition of bodies from without But as a world *is born and grows* it also *decays and* dies Many bodies ebb away and withdraw from things Lucretius writes but still more must join them until they have touched the utmost point of growth Then piece by piece age breaks their powers and matured strength and wastes away on the side of decay until *finally* in this way *even the walls of the wide* world all around will be stormed and fall to decay and crumbling ruin

According to Newton the atoms are indestructible but not eternal bodies Upon their indestructibility or permanence depends the uniform and enduring texture of nature in all ages That Nature *may be lasting* Newton says the changes of corporeal things are to be placed only in the various separations and new associations and motions of these permanent particles But for Newton the indivisibility of the ultimate particles of matter does not preclude their being created It seems probable to me he *writes that God in the* beginning formed matter in solid massy hard impenetrable movable particles of such size and figures and with such other properties as most conduced to the end for which he formed them

Not through the chance colligation of atoms but through their being variously associated in the first creation by the counsel of an intelligent agent is the world formed For it became him who created them to set them in order And if he did so Newton adds it s unphilosophical to seek for any other origin of the

world or to pretend that it might arise out of a chaos by the mere laws of nature though being once formed it may continue by those laws through many ages

Newton differs from Lucretius in these particulars but shares his view of the probability of many worlds Since space is divisible *in infinitum* and matter is not necessarily in all places it may also be allowed Newton declares that God is able to create particles of matter of several sizes and figures and in several proportions to space and thereby to vary the laws of nature and make worlds of several sorts in several parts of the universe At least he continues I see nothing of contradiction in all this

OTHER WRITERS SEEM TO FIND a plurality of worlds repugnant to reason if not flatly contradictory Plato for example appears to think that the possibility of other worlds is inconsistent with the perfection of this one—certainly if this world is made in the image of the eternal ideas Because the original of the universe contains in itself all intelligible beings Plato s Timaeus argues that there cannot be many worlds but one only if the created copy is to accord with the original It belongs to the world s perfection to be solitary and for this reason Timaeus explains the creator made not two worlds or an infinite number of them but there is and ever will be one only begotten and created Heaven

Aristotle reasons differently to the conclusion that there cannot be more worlds than one The conclusion follows in his view from the impossibility of an infinity of body or matter and with it an infinity of space The universe is certainly a particular and a material thing he writes If it is composed not of a part but of the whole of matter then though the being of universe and of this universe are still distinct yet there is no other universe and no possibility of others being made because all the matter is already included in this He thinks it a tenable hypothesis that the world as a whole includes *all* its appropriate matter hence he concludes neither are there now nor have there ever been nor can there ever be formed more heavens than one but this heaven of ours is one and unique and complete

On theological grounds Augustine challenges those who suppose either that this is not the only world but that there are numberless worlds or that indeed it is the only one but that it dies and is born again at fixed intervals and this times without number On theological grounds also though with a different conception of God and the universe Spinoza maintains that besides God no substance can be or be conceived that God is one which is to say in nature there is but one substance and it is absolutely infinite that all finite things have their existence in the one infinite substance of God and that God is not only the cause of the commencement of their existence but also of their continuance in existence Because God s liberty consists in Spinoza s conception in acting according to the necessity of His own nature not in freedom of will he insists that things could be produced by God in no other way and in no other order than that in which they have been produced This is not merely the only actual but the only possible world

Aquinas agrees that there is only one actual world The very order of things created by God he writes shows the unity of the world Since whatever things come from God have relations of order to each other and to God himself it is necessary that all things should belong to one world Therefore Aquinas continues only those were able to assert the existence of many worlds who do not acknowledge any ordaining wisdom but rather believed in chance as did Democritus who said that this world besides an infinite number of other worlds was made by a coming together of atoms

Aquinas places God s liberty in freedom of choice and so he contemplates the possibility of other worlds than this This is the only world God actually created but since in creating God does not act from natural necessity and since in the act of creation the divine will is not naturally and from any necessity determined to these creatures Aquinas concludes that in no way is the present scheme of things produced by God with such necessity that other things could not come to be

As the chapter on WILL indicates Spinoza holds that God does not have the power of free

choice He therefore argues that the actual world being the only possible one cannot be bettered All things he writes have been produced by God in the highest degree of perfection since they have necessarily followed from the existence of a most perfect nature Aquinas on the other hand denies that this is the best of all possible worlds Given the things which actually exist he says the universe cannot be better for the order which God has established in things and in which the good of the universe consists most befits things Yet God could make other things or add something to the present creation and then there would be another and a better universe

OTHER SPECULATIONS CONCERNING the cosmos seem to divide into three sorts according as they consider the matter and space the size and shape of the universe or they try to discover the principle by which all things are ordered to ether in one world or they examine what ever order is found and judge its perfection its goodness and its beauty

The first of these three types of cosmological theory belongs primarily to the physicist and the astronomer From Aristotle to Einstein observation mathematical calculation and imaginative hypotheses have propounded the alternatives of a finite or infinite universe or as Einstein prefers to put it of a finite yet unbounded universe as opposed to one which is either simply finite or both infinite and unbounded

Archimedes in the *Sand Reckoner* undertakes to show that the number of the grains of sand in a universe whose outer sphere extends to the distance of the fixed stars is however large a finite rather than an infinite number Lucretius and Newton as we have seen embrace the opposite hypothesis while Aristotle defends the proposition that the universe is finite bounded and spherical in shape Among the great astronomers Copernicus and Kepler no less than Ptolemy conceive the world as bounded by an outer sphere Copernicus opens his treatise by remarking that the world is like a globe whether because this form is the most perfect of all or because it is the figure having the greatest volume or because the separate parts of the world *i e* the sun moon and stars are seen under such a form or because all things seek to be delimited by such a form as is apparent in the case of drops of water and other liquid bodies when they become delimited through themselves

A spherical or (if matter is not distributed uniformly) an elliptical or quasi-spherical universe will be necessarily finite according to Einstein but it will also have no bounds Among the conceivable closed spaces without limits Einstein points out that the spherical space (and the elliptical) excels in its simplicity since all points on it are equivalent But whether the universe in which we live is infinite or whether it is finite in the manner of the spherical universe he thinks is a question that our experience is far from being sufficient to enable us to answer Recent astronomical observations of the velocity of the receding nebulae have suggested the hypothesis of an infinitely expanding universe

These cosmological theories are more fully discussed in the chapter on SPACE Another point of physical speculation concerning the uniformity of the world s matter—not the uniformity of its distribution but the sameness or difference in kind of terrestrial matter and the matter of the heavenly bodies—is considered in the chapters on ASTRONOMY and MATTER We turn therefore to the question of the world s structure apart from its size its shape and the disposition of its matter

THREE METAPHORS SEEM to express the great traditional images of the world s structure The world is a living organism *It is like an animal* with a soul even a soul endowed with reason The world is a multitude of diverse and unequal individual things forming a hierarchy and associated according to their natures and functions for the common good of the whole *It is like a society* a society under divine law and government The world is a system of interdependent moving parts linked together from the least to the greatest in an unbroken chain of causation *It is like a machine*

The first of these world views is proposed by Plato It is not the earliest of the three perhaps if the atomistic cosmology of Democritus which Lucretius later expounds can be interpreted as adopting the mechanical analogy F

mechanism may however be thought to await 17th century developments in the science of mechanics when for Descartes Newton and others the laws of mechanics become the only laws of nature The conception of the world as a divinely instituted and governed society seems to be a product of Jewish and Christian faith Though that expression of it which includes a hierarchical ordering of all things from the elemental bodies to the angels belongs to Christian theologians and poets there may be a pre Christian version in the Stoic theory of the world as governed by a divine intelligence

According to Plato in the *Timaeus* God desired all things to be good and nothing bad and he found that no unintelligent creature taken as a whole was fairer than the intelligent taken as a whole and that intelligence could not be present in anything which was devoid of soul For which reason Timaeus explains when he was framing the universe he put intelligence in soul and soul in body Wherefore using the language of probability we may say that the world became a living creature truly endowed with soul and intelligence by the providence of God Since his intention was that the animal should be as far as possible a perfect whole and of perfect parts he gave it self sufficiency a spherical body—which figure comprehends within itself all other figures —and circular movement The universe did not require therefore sense organs or hands or feet

Such was the whole plan of the eternal God about the god that was to be to whom for this reason he gave a body smooth and even having a surface in every direction equidistant from the center And in the center according to Timaeus he put the soul which he diffused throughout the body making it also to be the exterior environment of it and he made the universe a circle moving in a circle Having these purposes in view he created the world a blessed god

The theory of a world soul and of an animated organic universe appears not only in the *Timaeus* but also in other Platonic dialogues In the *Phaedrus* for example Socrates says that the soul in her totality has the care of inanimate being everywhere and in the *Laws* the Athenian Stranger asking whether it is the soul which controls heaven and earth and the whole world replies that the best soul takes care of the world and guides it along the good path

In somewhat different form the theory of a world soul appears in Plotinus according to whom the cosmic soul belongs only to the material universe and is therefore third and lowest in the scale of the authentic existents. It appears in Gilbert and Kepler though in the latter largely as the expansion of a metaphor It is considered by William James whose comment on the materialistic or so called scientific conceptions of the universe is that they leave the emotional and active interests cold whereas he thinks the perfect object of belief would be a God or Soul of the World represented both optimistically and moralistically All science and all history would thus be accounted for in the deepest and simplest fashion

Precisely because exponents of the doctrine attribute divinity to the world soul Augustine and Aquinas object to it Impious and irreligious consequences follow in Augustine s opinion from the notion that *God is the soul of the world and the world is as a body to Him* To those who compare the microcosm with the macrocosm by saying that the soul is in the body as God is in the world Aquinas replies that the comparison holds in a certain respect namely because as God moves the world so the soul moves the body But it does not hold in every respect for the soul did not create the body out of nothing as God created the world

Furthermore according to Aquinas God is not a part of it but far above the whole universe possessing within Himself the entire perfection of the universe in a more eminent way God in relation to the world should not be conceived by analogy with soul and body but by comparison to a king who is said to be in the whole kingdom by his power although he is not everywhere present This analogy fits better with the conception of the universe as a society under divine government

Although Aurelius reminds himself to regard the universe as one living being having one substance and one soul he also takes the view that the world is a community of things ordered to one another The intelligence of

the universe is social he writes Accordingly it has made the inferior things for the sake of the superior and it has fitted the superior to one another It has subordinated co-ordinated and assigned to everything its proper portion This view of the universe as a community is the one most fully developed in Christian thought Augustine and Aquinas go much further than Aurelius in depicting the hierarchy of things and their ordination to one another under the eternal law Both take as a basic text from Scripture the statement that God has ordered all things in measure and number and weight According to its dignity or worth each thing occupies a place and plays its part in the general scheme of things

The parts of the universe are ordered to each other Aquinas writes according as one acts on another and according as one is the end and exemplar of the other The government of the universe by the divine reason produces a perfection of order in the whole which is the intrinsic common good of the universe and directs each thing to the attainment of its end in which consists its own perfection It belongs to the divine goodness Aquinas says as it brought things into being to lead them to their end And thus is to govern But neither the perfection of each thing nor the order of the universe itself is the ultimate end of divine government Some good outside the whole universe he says is the end of the government of the universe —for the end of all things as their beginning lies in the goodness of God

THE CONCEPTION OF THE WORLD as divinely governed and cared for by divine providence excludes chance as a factor in the formation of the world or in its structure With Democritus and Epicurus in mind Aquinas points out that certain ancient philosophers denied the government of the world saying that all things happened by chance But the rejection of chance does not seem to be peculiar to Christian faith or theology

Plato and Plotinus also deny that the order in the universe can be the result of chance For Plato it is not merely that the world is animated by a rational soul but also as the Athenian Stranger suggests in the *Laws* that it is a work of art rather than of nature or chance

Atoms or elements —it is in either case an absurdity an impossibility writes Plotinus to hand over the universe and its contents to material entities and out of the disorderly swirl thus occasioned to call order into being According to him there is nothing undesigned nothing of chance in all the process Aristotle too speaks against the atomists who ascribe this heavenly sphere and all the worlds to spontaneity or chance When one man he writes referring to Anaxagoras said that reason was present—as in animals so throughout nature—as the cause of order and of all arrangement he seemed like a sober man in contrast with the random talk of his predecessors

It might be supposed that those who view the world through the eyes of Newton or Descartes (when they say as Fielding does the world may indeed be considered as a vast machine) would be inclined to favor chance rather than reason or design But this does not seem to be the case at least not for Newton or Descartes This most beautiful system of the sun planets and comets Newton declares could only proceed from the counsel and dominion of an intelligent and powerful Being

Descartes asks us to consider what would happen if God were now to create a new world somewhere in an imaginary space Suppose that He agitated its matter in various ways so that there resulted a chaos as confused as the poets ever feigned and concluded His work by merely lending His concurrence to Nature in the usual way leaving her to act in accordance with the laws which He had established Something like this orderly universe would be the result The laws of matter in motion Descartes thinks are of such a nature that even if God had created other worlds He could not have created any in which these laws would fail to be observed

In the tradition of the great books only the ancient atomists seem to take the position that the universe is a thing of chance But this does not mean that except for the atomists agreement prevails concerning the manifestation of purpose or design in the world s structure Is the Kosmos an expression of intelligence rational in its inward nature or James asks a brute external fact pure and simple? James finds two answers to this question which

calls the deepest of all philosophic problems —one which regards the world as a realm of final purposes that exists for the sake of something and one which sees the present only as so much mere mechanical sprouting from the past occurring with no reference to the future

As the chapter on MECHANICS indicates Newton and Descartes are in a sense mechanists yet they also affirm final causes—ends or purposes—in the plan of the universe Newton speaks of God s most wise and excellent contrivance of things and final causes It is true that Descartes while referring to the universe as a work of divine art says that God s purpose may not be visible to us in all its arrangements Therefore the species of cause termed final finds no useful employment in physical (or natural) things for it does not appear to me he explains that I can without temerity seek to investigate the (inscrutable) ends of God But this states a rule of method in natural science not the denial of a cosmic plan

That denial is to be found however most plainly in Spinoza It is commonly supposed he writes that all things in nature like men work to some end and indeed it is thought to be certain that God Himself directs all things to some sure end for it is said that God has made all things for man and man that he may worship God Against this view which he regards as the most besetting of all human prejudices Spinoza holds that nature does nothing for the sake of an end for that eternal and infinite Being whom we call God or Nature acts by the same necessity by which He exists Since He exists for no end He acts for no end and since He has no principle or end of existence He has no principle or end of action A final cause as it is called Spinoza continues is nothing therefore but human desire in so far as this is considered as the principle or primary cause of anything

Because man discovers things in nature which serve as means to his own ends man is led to infer Spinoza declares that some ruler or rulers of nature exist endowed with human liberty who have taken care of all things for him and have made all things for his use and hence he affirmed that the gods direct every thing for his advantage in order that he may be bound to them and hold them in the highest honor Thus has this prejudice been turned into a superstition and has driven deep roots into the mind—a prejudice which was the reason why everyone has so eagerly tried to discover and explain the final causes of things. The attempt however to show that nature does nothing in vain (that is to say nothing which is not profitable to man) seems, in Spinoza s opinion to end in showing that nature the gods and man are alike mad

WHERE SPINOZA DENIES purpose or plan in the universe because everything exists or happens from the necessity of efficient not final causes (and ultimately from the necessity of nature or God himself) Lucretius argues against design or providence from the imperfection of the world To those who suppose that the gods designed all things for the sake of men Lucretius says Even if I did not know what first beginnings are yet this judging from the very arrangements of heaven I would venture to affirm and led by many other circumstances to maintain, that the nature of the world has by no means been made for us by divine power so great are the defects with which it stands encumbered

Spinoza would dismiss this argument He thinks he can easily answer those who ask, How is it that so many imperfections have arisen in nature—corruption for instance of things till they stink deformity exciting disgust confusion evil crime etc ? He holds that the perfection of things is to be judged by their nature and power alone nor are they more or less perfect because they delight or offend the human senses or because they are beneficial or prejudicial to human nature"

Others deal differently with the apparent imperfections in the world Descartes, for example makes the point that the same thing which might possibly seem very imperfect if regarded by itself is found to be very perfect if regarded as part of the whole universe Marcus Aurelius goes further Nothing is injurious to the part he writes if it is for the advantage of the whole By remembering then that I am part of such a whole I shall be content with everything that happens

In terms of another principle Berkeley asks

us to consider that the very blemishes and defects of nature are not without their use in that they make an agreeable sort of variety and augment the beauty of the rest of creation as shades in a picture serve to set off the brighter and more enli htened parts As for the mixture of pain or uneasiness which is in the world pursuant to the general laws of nature he thinks that this in the state we are in at present is indispensably necessary to our well being

In the opinion of those philosophers who after an exact scrutiny of all the phenomena of nature conclude that the *whole* considered as one system is in every period of its existence ordered with perfect benevolence Hume sees only a specious if also sublime consolation for all human ills But he does not think such convictions ever really work in practice These enlarged views may for a moment he says please the imagination of a speculative man who is placed in ease and security but neither can they dwell with constancy on his mind even though undisturbed by the emotions of pain or passion much less can they maintain their ground when attacked by such powerful antagonists

But according to theologians like Augustine and Aquinas evil does not and cannot exist in the world except as a privation or corruption of some good Evil neither belongs to the perfection of the universe nor comes under the order of the universe writes Aquinas except accidentally that i by reason of some good joined to it But how does evil enter into a world created by a supremely good deity? What God chiefly intends in created things Aquinas answers is the good of the order of the universe Now the order of the universe requires that there hould be some things that can and sometimes do fail And thus God by causing in things the good order of the universe consequently and as it were by accident causes the corruptions of things Furthermore the order of justice belongs to the order of the universe and this requires that penalty should be dealt out to sinners And so God is the author of the evil which is penalty but not of the evil which is *fault*

ON THIS POINT OF THE PERFECTION of the universe the great conversat on passes from the order of the world to the problem of evil and to related issues When Freud for example in commenting on what he calls the religious Weltanschauung says that earthquakes floods and fires do not differentiate between the good and devout man and the sinner and unbeliever he raises questions which are considered in the chapters on JUSTICE PUNISHMENT and GOOD AND EVIL The perfection of the universe also leads to a discussion of the beauty of its order The praises which are differently voiced by the astronomers the theologians and the poets extol not the visible beauties of nature but the intelligible beauty of the cosmic structure—perceptible to a Kepler in his mathematical and musical formulation of the harmonies of the world

In addition to questions of its goodness and beauty the problem of the world's order is sometimes stated in terms of its rationality For some writers such as Hegel rationality is affirmed as the very foundation of existence *What is rat onal is actual and what is actual is rational* he writes On this conviction the plain man like the philosopher takes his stand and from it philosophy starts in its study of the universe of mind as well as the universe of nature To others like William James the whole war of the philosophies is over that point of faith Some say that they can see their way already to the rationality others that it is hopeless in any other but the mechanical way To some the very fact that there is a world at all seems irrational

Against the Hegelian notion of the world as a perfectly ordered whole (to which James applies the epithet block universe) James proposes the conception of a concatenated universe The real world as it is *given at this moment* James declares is the sum total of all its beings and events now But can we *think* of such a sum? Can we realize for an instant what a cross section of all existence at a *definite* point in time would be? While I talk and the flies buzz a sea gull catches a fish at the mouth of the Amazon a tree falls in the Adirondack wilderness a man sneezes in Germany a horse dies in Tartary and twins are born in France

What does that mean? James asks Does the contemporaneity of these events with each

other and with a million more as disjointed as they form a rational bond between them and unite them into anything that means for us a world? It would certainly not mean a universe or cosmos for those who like Hegel insist upon the pervasive unity of the universe as a whole which completely and rationally relates all its parts But for James who conceives the universe in a pluralistic rather than in a monistic fashion the collateral contemporaneity of all things and nothing else is the *real* order of the world

ALL OF THESE ISSUES carry the discussion back to what is perhaps the decisive question—the question of the world s origin According as men believe it to be the purposeful work of a beneficent intelligence or the product of blind chance or of equally blind necessity their other judgments about the world tend in the general directions of optimism or pessimism Yet this is only true for the most part

The problem of the world s origin involves some technical issues which do not seem to have such consequences for man s appraisal of the universe One is the question whether a created world has a beginning in time or is co-eternal with its creator As is indicated in the chapters on ETERNITY and TIME whichever way the disputed question concerning the eternity of the world is answered its creation may be affirmed or denied Those who think the world is created declare that the power needed to maintain the world in being is identical with the creative power needed to initiate it The divine conservation as Berkeley points out is conceived a a continual creation

The most difficult point in issue concerns the meaning of creation itself According to Christian doctrine the essence of creation consists in making something out of nothing On this principle Aquinas for example contrasts creation with generation or procreation and with artistic production In biological generation the offspring is produced out of the substance of its progenitors In artistic production some pre-existent material is transformed by the craftsman But according to the theologian creation is not change for change means that the same thing should be different now from what it was previously

In becoming or alteration some being is presupposed Creation is more perfect and more excellent than generation and alteration Aquinas says because the term *whereto* is the whole substance of the thing whereas what is understood as the term *wherefrom* is absolutely non being which as he remarks is the same as *nothing* Since the distance between total non being and being is infinite only an infinite power can create or make something out of nothing

Lucretius flatly denies this possibility when he asserts as a first principle that nothing can be produced from nothing Not even the gods can violate this principle Nothin he declares is ever gotten out of nothing by divine power To Locke on the other hand the inconceivability of creation constitutes no argument against it Writers like Lucretius must give up their great maxim *Ex nihilo nihil fit*

It is not reasonable to deny the power of an infinite Being because we cannot comprehend its operations We do not deny other effects upon this ground Locke continues because we cannot possibly conceive the manner of their production It is an over valuing ourselves to reduce all to the narrow measure of our capacities and to conclude all things impossible to be done whose manner of doing exceeds our comprehension

But may not the world be related to a supreme cause or principle in some way which does not involve *exnihilation*? The great books present various alternatives Aristotle s prime mover is the unmoved and eternal cause of the world s eternal motion not of its coming into being or its conservation in being Plato s demiurge is a divinity which according to the myth of the world s origin in the *Timaeus* fashions the universe after the model of the eternal ideas, artistically producing their sensible replicas in the matter or space which is called the receptacle

The emanation of the sensible as well as the intelligible world from the transcendent All One in the cosmogony of Plotinus or the production of finite things from the infinite substance of God in Spinoza s theory seem to be more like generation or procreation than like creation in the meaning of the opening chapter of Genesis

Such theories according to theologians like Augustine and Aquinas or philosophers like Berkeley and Locke deny what is meant by creation in the Judaeo-Christian tradition To Berkeley they are all equally forms of atheism Yet it should be remarked that to Spinoza a theory like that of Plato s is also impious for it places something outside of God which is independent of Him to which He looks while He is at work as to a model or at which He aims as if at a certain mark This is indeed nothing else than to subject God to fate the most absu d thing which can be affirmed of Him whom we have shown to be the first and only free cause of the essence of all things as well as of their existence

THE VARIOUS THEORIES OF the world s origin usually extend also to the problem of the world s end Aristotle for example who denies a beginning to the motions of the heavens and all other cycles of natural change affirms them to go on in everlasting perpetuity But it is not merely those who think the world has no beginning or source who attribute endless endurance to it If the world did not have endless duration it would not be for Plato the moving image of eternity And though they conceive the world as somehow a divine emanation or production Plotinus and Spinoza no less than Aristotle hold it to be everlasting if not eternal We hold that the ordered universe in its material mass Plotinus writes has existed for ever and will for ever endure

The proposition that nothing is ever reduced to nothin is for Lucretius as true as the principle that nothing ever comes from nothing H applies these principles however only to the eternal atoms uncreated and indestructible not to the world after world which ari es and perishes as the atoms come together and disperse J st as any compound body which atoms form can be dissolved into its s mple bodies so whole worlds are subject to similar dissolution and will suffer it in the course of long ages Yet thou h world succeeds world in the cea eless activity of the eternal atoms Lucretius contemplates a universe without beginning or end

Since annihilation (or reduction to nothingness) is the opposite of exnihilation (or creation out of nothing) it might be expected that the doctrine which rests on the faith that in the beginning God created Heaven and earth would also foresee an end to all things—a return of the whole created universe to the nothingness from which it came Sacred Scripture does contain the prophecy of a final cataclysm The earth shall reel to and fro like a drunkard and shall be removed like a cottage says Isaiah Reciting the parable of the tares in the field Matthew explain that as the tares are gathered and burned in the fire so shall it be in the end of this world In the Gospel according to Luke Christ foretells His second coming

And there shall be signs in the sun and in the moon and in the stars and upon the earth distress of nations with perplexity the sea and the waves roaring

Men s hearts failin them for fear and for looking after th e things which are com ng on the earth for the powers of heaven shall be shaken

A d then shall they see the Son of man coming in a cloud with g eat po er and great glory

Heaven and earth shall pass away but my word shall not pass away

But there is one other text which exercises a controlling influence on the theologian s interpretation of Scripture In the second Epistle of Peter we find

th day of the Lord will com as a thief in the night in the which the hea ens shall pass away w th a great noise and the elem nts shall melt with fer ent heat the ea th also and the wo ks that are therein sh ll b burned up

Neve th less we according to his prom se look for new heavens nd a new earth whe ein dwelleth righteousn ss

The final conflagration will be the end of the world as we know it but it will bring about the re formation not the annihilation of the material universe As God has the power to creat so according to Aquinas He has the power to annihilate but since the power and goodness of God are rather manifested by the conservation of things in being we must conclude by denying absolutely that anything at all will be annihilated In the concluding treatises of the *Summa Theolog ca*—dealing with the end of the world the Last Judgment and the resurrection of the body—the final cataclysm is described as the cleansing of the world by fire to bring *into being* a new earth and a new heaven

In our time men talk of the end of the world as an event which might by chance occur

chain reaction set up by atomic fission got out of control and exploded the whole material universe The physicist s theory of entropy also forecasts the eventual dissipation of energy to the point at which the universe will be a frozen mass of inert matter These are secular alternatives to the religious prophecy of the world s end But what Jesus said of the Last Judgment —that its time is a secret hidden from men—may be applicable to any termination of the world certainly if it lies in the hands of God, and not merely at the disposal of man or nature.

OUTLINE OF TOPICS

REFERENCES

To find the passages cited use the numbers in heavy type which are the volume and page numbers of the passages referred to For example in 4 Ho ER *Iliad* BK II [265 83] 12d the number 4 is the number of the volume in the set the number 12d indicates that the passage is in section d of page 12

PAGE S CTIONS When the text is printed in one column the letters a and b refer to the upper and lo er hal es of the page For example in 53 JAMES *Psychology* 116a 119b the pas sa e be ins in the upper half of page 116 and ends in the lo er half of page 119 When the te t is pri ted in two columns the letters a and b refer to the upper and lower hal es of the left hand side of the page the lette s c and d to the upper and lower halves of the right hand side f th p ge For example in 7 PLATO *Sympos m* 163b 164c the passage beg ns in the lower half of the left hand side of page 163 and ends in the upper half of the right hand side of page 164

AUTHOR S D ISIONS One or more of the ma n divisions of a work (such as PART BK CH S CT) are sometimes included in the reference line numbers in brackets are g ven in certain cases *e g Iliad* BK II [265-283] 12d

BI LE REFER NCES The eferences are to book chapter and verse When the King James and Douay ve ons diff in title of books or in the numbering of chapters or verses the King J mes version is cited first and th Douay ind cated by a (D) follows *e g* OLD TESTAMENT *N hemiah* 7 45—(D) *II Esdras* 7 46

S M OL The bbreviati n esp calls the reader s attent on to one or more especially rele a t parts of a whol reference pass m s gnifies that the top c is discussed intermittently r th r than cont nuou ly in the work or passage c ted

For add t onal nfo mati n c nce ning the style of the references see the Explanation of Reference Style f r g neral guidance in the use of *Th G eat Ideas* consult the Preface

D ver e conceptions of the un erse

The uni e se a l ing organism the doc tr ne of the world soul

7 PLAT *Pha d* 124b d / *T maeus* 447d 450c / *St t m* 586 590a / *Pl lebus* 618b 619d / *Laws* K X 757d 765

8 ARISTOTLE *Phys* K VI I H 2 [52b17 8] 336c d [253 6-2] 337a b / *Heavens* BK II CH I [84 7 35] 376a / *S ul* BK H 5 [41 6- 3] 641a b

12 E IC T S *D ur* BK CH 14 120d 121a

12 AU EL U *M d tat s* BK V ECT 29 266 SEC 4 267 b SECT 46 267 BK V S CT 8 269d 270b S CT 3 273a BK I S T 38 277 d K S T 9-1 280b BK IX CT 8 292b K ECT 6-7 297a c K X E T 29-3 310a b

13 VIR L *A d* K V [7 4 734] 230b 231

16 K PLER *Ep t me* K IV 853b 856a / *H r mo f th W ld* 1030a 1083 1084b

17 PLOTI U *S ond E d* TR CH 4 36d 37b TR I 40a 42a R CH 13 46 47b H 6-18 48b 50a TR IX 65d 77d p s m / *Th d En n d* TR H 4 79d 80a R I H 6 90c 91c TR VI I 129 136 p im / *F ll E e d* TR III C I I 141 149b p m TR I H 6-16 161b 166b 2 7 168d 172a CH 29-45 173b 183a passim TR VIII CH 2 201c 202a TR VIII C 7 TR IX CH I 204b 205c / *Fifth Ennead* TR C 208d 209a TR II CH 215 c TR X CH 3 247b d CH 13 14 251a d / *S xth E n d* TR V CH 12 310b d

18 AUGU T NE *C ty of God* BK IV CH II 13 194 196b BK V I CH 5 6 247b 248b C I 9 249d 250 CH 13 251 252a CH 23 256b 257b BK X CH 29 317d K XII CH 16 367c

19 AQUINAS *S mm Th ol g a* PART I Q 3 A 8 ANS 19d 20 Q 47 A I ANS 256a 257b Q 90 A I NS 480d 481d

23 HO B S *Le i than* PART I 162b

28 GIL ERT *L adston* K V 104b 105d

34 N VTON *P in pl s* K I GENERAL SCHOL 370a / *Opt s* BK I I 542b 543a

40 GI BON *D cl ne a d F ll* 307b c 767c [n 18]

42 KANT *Jud ement* 565d

48 MELVILLE *M by Di k* 115b 117a

51 TOLSTOY *War a d Pe e* BK XIV 608a b

53 JAME *P y h logy* 658b 659a

1*b* The uni erse as a mach ne the sy tem of ts mo ing p rts

12 LU R T U *N tu e f Th g* K I [4 8 448] 6b K I [62-3 7] 15d 19a

12 AUR LIU *M d t t o s* BK X ECT 6 297 b

17 PLOTINUS *Th d E d* T I H 2 3 78d 79c

(1 D verse conc ptions of the un v rse 1b The uni erse as a macocu the system of its mot ng pa ts)

23 Hobbes *Leviath* P RT III 172b PART IV 269d
30 Bacon *No um O gan m* BK I APH 66 114d 115
31 Descartes *Di co irse* PART V 54d 56a / *Medit tions* IV 90a b / *Objectio s and Replies* 215a b
31 S inoza *Ethics* ART II AXIO I I LEMMA 7 SCHOL 378c 380b
34 Newton *P inc ples* 1a 2a BK III 269a 372a / *Op ics* BK III 540a 542a
35 Locke *Human Understanding* BK IV CH VI S CT II 334b 335b
35 Hu *Human Understanding* SECT VII DIV 56 475a b SECT VIII DIV 78 485c 486a
37 Fielding *Tom J e* 79c
38 Montesqui u *Spi it f L ws* BK I 1b
42 K nt *Judgem nt* 558b 559d 561c 562a c 562d 564a 568c 570b
45 Fourier *Theory of Heat* 169a b
53 J mes *Psychology* 5a 882a 884b 889b 890a

1c The uni erse as n ordered community of beings dive se n k nd eternal law and d ine go ernment

7 Pl to *C itias* 479c
8 Ari to e *Mete rol gy* BK I CH I 2 445a d / *Met physics* BK XI 598a 606d esp CH 10 [1075 12 24] 605d 606a
9 A istotle *P liti* K VII H 4 [1326a29 32] 530b-c
12 Ep ctetus *Disc ur es* BK I CH 14 154b c BK III C I 22 195 b CH 24 204a d BK V C I 7 233a b
12 Aur iu *Med tat ns* BK I SECT 4 57b BK V SECT 27 266a K V SECT 8 269d 270b BK VI ECT 274b c
17 Plotinus *S co d E n ad* TR III CH 7 44 45a / *Thi d En ead* TR I I 5 82c 97b pass m / *Fou th Enne d* TR III CH 13 149b d TR V C I 10 163a c
18 Au ust ne *City of God* K V CH I 216c d BK VI CH 6 268d 269c BK IX H 22 296d 297a BK XI CH 16-18 331a 332a CH 22 333d 334c C I 23 339a b BK XII CH 4-5 344b 345b BK XIX C I 3 517b 520a K XX I CH 24 609a 612a
19 Aqu as *Summa Th ol g a* PART I Q 2 A 3 12 14a Q II A 3 S 49 C Q 9 A 5 REP 2 112d 113c Q 21 I E 3 124b 125b Q 2 127c 132b Q 26 4 ANS 151c 152a c Q 44 A 3 240b 241a Q 47 3 258c 259a Q 48 A RE 5 259b-260c Q 6 AA 3 4 316a 317c Q 65 A 2 ANS 340b 341b A 3 RE I 341c 342b Q 73 A I ANS and REP I 370 371a QQ 103 119 528a 608d ART I II Q 17 A 8 REP 2 692a-c
20 Aquinas *Summa Theolog ca* PART I II Q 91 A I 208b d Q 93 215b d 220d
21 Dante *Divine Comedy* HELL VII [61-96] 10b c PARADISE I [97 14] 107b d II [112 148] 109a b VIII [91 114] 117d 118a X [1 36] 120b c XIII [52 81] 126 b XXVII [103 1] 148b c XXVIII 148d 150b XXIX [13 48] 150b d
22 Chaucer *Troilus and Cressida* BK III STA Z I 7 54b 55b STAN A 250- 53 87a b / *Knight's Tale* [2987-3016] 209a b
27 S akespeare *Troilus and C essida* ACT I SC III [75 139] 108d 109c
28 Harvey *On An mal Generation* 491d 49 a
30 Bacon *Advancement of Lea ing* 71a b
31 Descartes *Meditations* VI 99c
31 Spinoza *Ethics* PART I APPENDIX 369b-372d
32 M lton *Paradise Lost* BK V [468-505] 185b-186a
35 Locke *Human Underst ndi* BK III CH VI S CT II 12 271d 272b BK IV CH XVI SECT 12 370c 371a
35 Be keley *Human Knowledge* SECT 29-33 418c 419a passim SECT 105 109 433b-434b passim
38 Montesquieu *Spirit of La s* BK I 1a b
40 Gib on *D cline and Fall* 346c 347a
42 Kant *Pure R ason* 200c 209d 239a 240b / *Ju lgement* 578a 587a p1 m 591d [fn 1]
47 Goeth *Fau t* PROLOGUE [243 270] 7a b
51 To stoy *War and Peace* BK V 216d 218b esp 217c

2 The universe and m n m crocosm and microcosm

7 Plato *Phaed us* 124b 126c / *Timaeus* 447b-453c 466a b / *Phil bus* 618c 619c
12 Lucretiu *Nature of Things* BK VI [647-652] 89a
12 Epictetus *D scourses* BK II CH 5 143d 144a BK II CH 13 188b 189 BK IV CH 7 232c 235a
12 Aurelius *Meditations* BK IV SECT 4 264a SECT 27, 266a
16 Ke l r *Ep tome* BK IV 849b 873b 915b 916a / *Harmonies of the World* 1080a b
19 Aquina *Summa Th ologica* PART I Q 91 A I ANS 484a 485b PART I II Q 17 A 8 REP 2 692a c
21 Dant *Di n Comedy* PARADISE I [97 142] 107b d II [112 148] 109a b
24 Rab ais *Gargantua and Pa tagruel* BK I I 137c 139b
25 Mont gn *E says* 213d 215 259a d
26 S ak pea e *R chard II* ACT V SC V [4] 349d 350a / *As You Like It* ACT II SC VI [36 166] 608c 609a
27 S i kesp are *Hamlet* CT II SC II [303 322] 43d / *K ng Le r* ACT I SC II 262d 263d / *Temp st* ACT V C I [146-158] 543b
29 Cervantes *Do Quixote* PART II 237c

30 BACON *Advancement of Learning* 33d 34b 50c d / *Novum Organum* BK I APH I 4 133c d
31 SPINOZA *Ethics* PART II PROP 1 13 373d 378c
32 MILTON *Paradise Lost* BK VIII [66-178] 233b-2 6a
33 PASCAL *Pensées* 2 181a 184b 347 348 233b 234a
35 LOCKE *Human Understanding* BK II CH II SECT 2 128a b
42 KANT *Practical Reason* 360d 361d / *Judgement* 497a-498b 591b 592d
46 HEGEL *Philosophy of History* INTRO 156d 190b esp 156d 162a 165a b PART I 220c 221a
47 GOETHE *Faust* esp PROLOGUE [280-292] 8a PART I [354-5 1] 11a 15a [1786-1802] 42b-43a PART II [46,9-4 2] 116b 117b
48 MELVILLE *Moby Dick* 78a b 120a 121a 168a b 204a 209b 231a 318a 347b 353b-354b 360b-361
51 TOLSTOY *War and Peace* BK V 216d 218b
52 DOSTOEVSKY *Brothers Karamazov* BK VI 168b c
53 JAMES *Psychology* 655a 659a esp 655b-656b 658b 659a
54 FREUD *General Introduction* 562c d

3 The universe and God divine immanence and transcendence

3a The unity of God and the world the distinction between *natura naturans* and *natura naturata*

OLD TESTAMENT *Jeremiah* 23 24—(D) *Jeremias* 23 24
APOCRYPHA *Wisdom of Solomon* 7 12 —(D) OT *Book of Wisdom* 1 7 12 1
NEW TESTAMENT *Ephesians* 4 6
12 EPICTETUS *Discourse* BK I CH 4 120d 121c
12 AURELIUS *Meditations* BK II SECT 9 280b-c
17 PLOTINUS *Second Ennead* TR IX CH 6 75c 76 / *Third Ennead* TR VI 1 129a 136a / *Fourth Ennead* TR IX 205a 20 a c / *Fifth Ennead* TR I CH 2 208 209b TR II 214c 215c TR II C 1 15-17 224c 226c TR VI 1 CH 7 242d 243 CH 9 243d 244
18 AUGUSTINE *Confessions* BK par 2 3 1b 2 BK I par 10 15b d par 8 18b BK IV par 26 25c d par 3 26c 27a BK VI par 4 36a b BK II par 7 43b 45d par 10-23 48 50 esp par 21 49d 50a BK X par 8 10 73b-74 BK X par 100d 101a / *City of God* BK V CH 12 13 195d 196b BK VII CH 6 248a b CH 30 261b d BK XI C 25 358b 359a / *Christian Doctrine* BK CI 12 627 d
19 AQUINAS *Summa Theologica* PART I Q 3 8 19d 20c Q 4 3 22b 23b Q 6 A 4 30b d Q 8 34 38c Q 51 A 3 REP 3 277a 278 Q 9 A 1 ANS 480d-481d PART I II Q 17 A 8 REP 2 69 a-c

21 DANTE *Divine Comedy* PARADISE XXXIII [82 105] 157a b
23 HOBBES *Leviathan* PART II 162b
28 HARVEY *On Animal Generation* 428c d
31 DESCARTES *Meditations* VI 99c
31 SPINOZA *Ethics* PART I 355a 3/2d esp DEF 3 6 355b AXIO 1 1 7 355 d PROP 1 8 355d 357d PROP 14 16 359d 62a PROP 18 363c PROP 2, 365b PROP 29 30 366b d PART II PROP 1 11 373d 37 c esp PROP, COROL and C OL 375a c PART IV PROP 4 425b d
32 MILTON *Paradise Lost* BK XI [334 346] 306b
34 NEWTON *Principles* BK III GENERAL SCHOL 370a 371a
35 LOCKE *Human Understanding* BK I CH XIII SECT 18 152 c CH XV SECT 2 4 162c 16 b
35 BERKELEY *Human Knowledge* SECT 149-150 442d 443b SECT 155 444b c
42 KANT *Practical Reason* 334b 335b / *Judgement* 565c d 566c d 580 d
46 HEGEL *Philosophy of History* INTRO 156d 157b 176b-c PART I 220 221a 224a b 227c 228a
47 GOETHE *Faust* PART I [447 453] 13
48 MELVILLE *Moby Dick* 115b 117a
51 TOLSTOY *War and Peace* BK V 216d 218b BK XIV 608 b BK XV 631a c
52 DOSTOEVSKY *Brothers Karamazov* BK VI 153b-d

3b The duality of God and the world the distinction between Creator and creature

OLD TESTAMENT *Psalms* 97 9—(D) *Psalms* 96 9
NEW TESTAMENT *I John* 5 7
9 ARISTOTLE *Motion of Animals* CH 3 [6,9 1]-CH 4 [700 5] 234 235a
12 LUCRETIUS *Nature of Things* BK I [146-158] 2d 3 BK I [167 183] 17a b [109- 104] 29 BK [76-90] 62a b [46-194] 63 -c BK VI [43 7] 80d 81b
18 AUGUSTINE *Confessions* BK I par 2 3 1b 2a BK I par 10 15b d BK IV par 25c d BK V par 4 36a b BK VII par 4 7 44b 45d par 16 23 48c 50c esp par 17 49a par 21 49d 50a BK X par 8 10 73b-74a BK XII par 7 100d 101a par 2 103d 104a / *City of God* BK VII CH 29 261 b BK XII CH 7 353a 354a
19 AQUINAS *Summa Theologica* PART I Q 3 A 8 19d 20c Q 8 A 1 ANS and REP 1 3 34d 35c A 3 36b 37c Q 18 A 4 107d 108c Q 44 AA 2 238b 240a Q 6 3 REP 2 316a d Q 9 A 1 ANS 480d-481d Q 103 A 2 529a 530a Q 05 A 5 542a 543b PART I II Q 17 A 8 REP 2 692a c
21 DANTE *Divine Comedy* PARADISE I [97 42] 107b-d I [112 148] 109 b X II [52-66] 120a XIX [40-66] 135c d XXVIII 148d 150b XXIX [127 145] 151c d
22 CHAUCER *Knight's Tale* [2987 3040] 209a 210a

174d 180a CH 45 182b 183a / F fth Ennead TR I CH 4-9 209d 213c TR III CH 10-12 221b 223c TR IV 226d 228b TR VIII CH 7 242d 243c / S xth Ennead TR II CH 21 279b 280a TR IV CH 2 297d 298c CH 4-5 299 300a TR V 305c 310d TR VII CH 1 2 321b-323a CH 16 330a-c

4e The creat on of the world *ex n hilo*

12 LUCRETIUS *Na u e of Things* BK I [146-214] 2d 3d

18 AUGUSTINE *Co f ssions* BK X par 9 73c d BK XI par 6-16 90c 93b BK XII XIII 99b-125 c

19 AQUINAS *Summa Theol gica* P RT I Q 21 A 4 REP 4 126c 127 QQ 44 46 238a 255d Q 50 A I ANS 269b-270a A 3 AN 272a 273b QQ 65-66 339a 349d Q 104 534c 538c P RT I-II Q 7 A 8 RE 2 692a-c

21 DANTE *Divine Comedy* PARADIS VII [21-148] 116b-c X [1 6] 120b X X [40-66] 135 d XXIX [13 48] 150b-d

23 HO BES *Leviathan* PART II 162b PART III 188d

30 BACON *Advancement of Learning* 17b d

31 D SCARTES *Discourse* PART V 54d 56a / *M ditat ons* IV 90a b / *Object ons and Repl es* P III 132d 133a esp COROL 133a 137d 138a 140b-c 229 d

31 SPINOZA *Eth cs* PART I PROP 17 SCHOL 362c 363 APP NDIX 370c 372d passim

32 M TON *P adise Lost* K I [6-10] 93b BK III [708-735] 150b-151b BK IV [720 735] 168a b K V [468 4,9] 185b BK VII [59-640] 218b 231a esp [139-161] 220a b

33 P SCAL *Pensees* 482 258a

34 NEWTON *Optics* BK III 541b 542a 543a

35 LOCK *Human Understa d g* BK IV C X SECT 15 352d 353a SECT 18-19 353c 354c

35 B RK LEY *Human Knowledge* S CT 92 431a

35 HUM *Hum n Understa di g* S CT XII DIV 132 509d [fn 1]

38 MONT SQ IEU *Spirit of Laws* BK I 1a b

42 KANT *Pu e Reas n* 132d 133 135a 137a c 152a d 160b-161d / *Pr ct cal Reason* 334b-335b / *Judgement* 594d [fn 1]

46 HEGEL *Phil sophy of History* PART I 245d 246a P RT IV 361a

49 DARWIN *Origi of Species* 239c-d

54 F EUD *New I troductory Lectu es* 875d 876a 877d

4 (1) The distinction between cre tion and motion gen at on and art st c produc t on

18 AUGUSTINE *Confessio s* K X par 7 90d 91a / *City f God* K XI CH I 327d

19 AQU NAS *Summ The logica* PART I Q 14 8 A 82c 83b Q 19 A 4 111c 112 Q 22 2 A 3 and RE 3 128d 130d Q 27 A I 153b-154b A 2 R P 3 154c 155b Q 44 2 239b-240 Q 45 241d 250 Q 66 A 343d 345c Q 75 A 6 REP 2 383c 384c Q 104 A I 534c 536c Q 110 A 2 ANS 565d 566d

23 HOB ES *Leviatha* INTRO 47a

35 LOCK *Huma Understanding* BK II CH XXVI SECT 217b d

4 K NT *Pu e Reason* 81d 82a 188c 189a

4e(2) The problem of time and ete nity in rela tion to creation the conservation of cre t res in t me

APOCRYPHA *W sdom of Solomon* 7 17 18—(D) OT *Book of W sdom* 7 17 18

17 PLOTINUS *Thi d E nead* TR I CH II 126a d

18 AUGUSTINE *Confessi ns* BK VI par 7 45c par 2 49d 50 BK XI pa 10- 7 91d 93c par 40-41 98d 99b BK XII par 4 109b-110 / *C ty of God* BK XI CH 4 7 324 326c BK XII CI 12 349b 350 C I 15 17 351b 354a

19 AQUINAS *Summ Theologica* PART I Q 8 A I ANS 34d 35c Q 9 A 2 ANS 39c-40d Q 14 A 12 ANS 85d 86d Q 46 250a 255d Q 61 A 315c 316a Q 66 A 4 348d 349d Q 75 A 6 REP 2 383c 384c Q 04 A I esp R P 4 534 536c AA 3 4 537b 538

21 D NT *Divin Comedy* PAR DIS XXIX [13 48] 150b d

30 B CON *Ad ancement of Learning* 17c

31 D SCARTES *D scou* PA T V 55d 56a / *Medit t ons* III 87b d / *Obj ctions a d Repl es* 228b

32 MILT N *Parad se Lost* K V [5 7-594] 187b 188a BK VII [70-1 8] 218b 219b

35 LO KE *Huma U derstand g* BK II CH XIV SE T 24 30 160b 161d esp S CT 30 161c d CH XV SECT 165c

35 B RK LEY *Huma Knowledge* S CT 46 421b-c

42 K NT *P actical Rea n* 334b-335b

4e(3) Th revelation and dogma of creat on interp et t ons of Genes s 1 the work of the s x days

OLD TE T MENT *Gen* I I 2 5 I 2 / *Exod* s 20 8- I esp 2 II / *I Sam el* 2 8—(D) *I Ki gs* 2 8 / *Nehem ah* 9 6—(D) *II Esd as* 9 6 / *Job* 9 4 13 10 8-13 12 7 0 26 7 14 28:24 27 38 4 13 / *Psalms* 8 24 I 2 33 6-9 74 16-17 89 II 2 9 12 95 4-5 96 5 102 25 6 104 19 73 90 I 2 36 5-9 146 5-6 148—(D) *Ps lms* 8 3 I 2 32 6-9 73 6-17 88 2 13 89 2 94 4-5 95 5 126-27 103 118 73 9 20.2 35 5-9 145 5-6 148 / *Proverbs* 3 19-20 8 22 3 / *Ec les stes* 3 II / *Is iah* 4 2 28 42 5 44 24 45 7-8 12 18 48 12 13 51 13 —(D) *I* 40.21 28 42 5 44 24 45 7-8 12 18 48 2 13 5 13 / *Jerem h* I 10-13 27 5 31 35 5 15 16—(D) *Jeremia* 0 10-13 27 5 31 35 51 5 16 / *Amo* 4 13 5.8 / *J ah* I 9—(D) *Jo as* 9 / *Z cha ah* 12 I—(D) *Z ha* s 12 I

APO RYP A *J d th* 16 14—(D) OT *Jud th* 16 7 / *Re t f Esther* 3 10—(D) OT *Esther*

(4e *The creation of the world* ex nihilo 4e(3) *The revelat on and dogma of creat on, in terp etations of Genes s 1 the work f the six days*)

13 10 / *Wisdom of Solomon* 1 14 6 7 7 15 21 9 1 9 11 17 24—(D) OT *Bo k of Wisdom* 1 14 6 8 7 15- 1 9 1 9 11 18 25 / *Ecclesias ticus* 17 1-9 18 1 6 23 19-20 24 8-9 33 7 15 39 16-35 4 15 43 27—(D) OT *Eccle si ist cus* 17 1-8 18 1 5 23 28 9 24 12 14 33 7 15 39 21 41 42 15 43 29 / *Song of Three Ch ld en* 34-60—(D) OT *Da iel* 3 56-82 / *Bel and Dragon* 5—(D) OT *Da iel* 14 4 / *II Macc bees* 7 23 28—(D) OT *II Macha bees* 7 23 28

NE V TESTA IENT *John* 1 1 10 / *Acts* 14 15 17 17 22 28—(D) *Acts* 14 14-16 17 22 8 / *Romans* 1 19-20 / *Colossi s* 1 16-17 / *He breus* 10-11 3 4 11 3 / *II Peter* 3 5 / *Reve lat on* 4 11 10 6 14 7—(D) *Apocalypse* 4 11 10 6 14 7

18 AUGUS NE *Confess ons* BK VII par 7 45a d BK XI par 5 17 90b 93c BK XII XIII 99b-125a c / *City of God* BK VII CH 9 261a b BK VIII CH 9-12 270d 273a BK X CH 31 319b d K XI CH 4 34 324a 342a c K XII 342b d 360 c esp CH 1 2 342b d 343d CH 4-5 344b 345b CH 9-27 347b 360a c BK XXII CH 1 586b d 587b

19 AQUINAS *Sum ia Theol gica* PART I Q A 2 REP 3 31d 32c Q 8 A 3 ANS and REP 1 36b 37 Q 14 A 12 ANS 85d 86d Q 2 A 4 REP 4 126c 127c QQ 44 46 238a 255d Q 56 A 2 REP 4 292d 294a QQ 65 74 339a 377a c

20 AQUINAS *S mma Theologica* PART III Q 3 A 8 RE 2 729b 730b

21 DANT *Divine Comedy* PARADI E VII [121 148] 116b c X [1-6] 120b XI [52-87] 126a b XIX [40-51] 135c XXIX [1 48] 150b d

30 BACON *Advancement of Lear* 17b d / *Novum O gan m* BK II AP 1 15 149a

32 MILTON *Pa ad se Lost* BK III [708-735] 150b 151b BK V [468 479] 185b [800-863] 192b 194 BK XII [59-640] 218b-231a esp [139-16] 220a b

37 FIELDING *T m Jones* 187d 188a

52 DOSTO KY *B others Ka ama ov* BK V 120d 121c

5 The number of worlds the uniq eness of th s wo ld the possibil ty or actuality of other worlds

7 PLATO *Tim eus* 448a b 459b-c / *Sta sman* 586c 590a

8 A ISTOTL *Phys c* BK II CH 4 [203^b 5 9] 281c-d BK VIII CH 1 [250^b 5 251 8] 334a-c [252 ^{b}7] 335d 336b / *Heaven* BK I CH 8-9 367b 370d CH 10 [279^b1 17] 370d 371a [8 3 34] 371c d

12 LUC US *Nature f Thi gs* K I [1023 1174] 28a 30 c

18 AUGUSTINE *City of God* BK XI CH 5 324d 325c BK XII CH 11 349a b CH 13 350a d CH 17 353a 354a CH 19-20 354d 357a

19 AQUINAS *Summa Theologica* PART I Q 25 AA 5-6 147d 150a

25 MONTAIGNE *Essays* 252b 253a 443a b

31 D SCARTES *Discou se* PART V 54d 56a / *M d tations* IV 90b / *Object ons and Repl es* 228b

31 S INOZA *Ethics* PART I PROP 33 367b 369a

32 MILTON *Parad se Lost* BK II [910-9 0] 131a

34 NE VTON *Opt cs* BK III 543a

6 The structure of the world

6a The parts and places of the world the uni form ty of the matter of the world

NEW TESTAMENT *I Cori thians* 15 40-41

7 PLATO *Phaedo* 247b 250a / *Timaeus* 448a 449c

8 ARI TOTLE *Heavens* BK I CH 2 359d 360d CH 3 [270 1 ^{b}26] 361b 362a CH 9 [279 1 ^{b}4] 370b d BK II CH 4 [287^b15 21] 379b CH 7 380c d / *Me aphysics* BK VIII CH 4 [1 44^{b}2-8] 569a b BK IX CH 8 [1050^b6-27] 576b-d esp [1050^b20-27] 576c d BK XI CH 6 [1063 10-17] 591b BK XII CH 2 [1069^b24 27] 599a

9 ARISTOTLE *Parts of A imals* BK I CH 5 [644^b21-645 5] 168c d

12 LUCRETIUS *Nature of Things* BK I [418 448] 6b [1052 1094] 14a c BK II [294 307] 18d 19a BK V [534-563] 68a b

16 PTOLE Y *Almagest* BK I 5a 6a 8b 9a 11b BK XI 1 429a b

16 COPERNICUS *Revolt tions of the Heavenly Spheres* BK I 511b 517b 518a 519b-520a

16 KEPLER *Epit me* BK IV 853b 857b 888b-890b 894a b 919b 929b-930b 931b 932a 935a b

17 PLOTINUS *Second Ennead* TR I 35a 39d TR IV CH 8 52c 53a / *Third Ennead* TR V CH 6 104a

19 AQUINAS *Su nma Theologica* PART I Q 10 A 5 ANS 44b-45c A 6 REP 2 45c 46d Q 55 A 2 AN 289d 290d Q 58 A 1 ANS 300c 301a A 3 ANS 301d 302d Q 66 A 2 345d 347b Q 68 A 1 ANS 354a 355c Q 70 A 3 ANS and REP 2 365b 367a Q 75 A 6 ANS 383c 384c Q 84 A 3 REP 1 443d-444d Q 97 A 1 A 5 513c 514 Q 104 A 1 REP 1 3 534c 536c Q 1 5 A 3 ANS 588c 589c

20 AQUINAS *S mma Th l ica* PART I II Q 49 A 4 ANS 5a 6a P RT III Q 5 A 2 ANS 736d 737c

21 D NT *Dvine Comedy* AR DISE II [112 148] 109a b X [1-36] 120b-c XXII [124 154] 140d 141b XXVII 148d 150b

23 HO BES *Leviathan* P RT III 172b PART I 269d

28 GIL ERT *Load t ne* BK VI 110b-c

28 G LIL O *Two New Sciences* THI D D Y 214d

33 P L *Vacuum* 358

34 NEWTON *Principles* BK III RULE III 270b-271a PROP 7 281b 282b
41 GIBBON *Decl e and Fall* 226b

6b The diversity inequality and hierarchy of things

OLD TESTAMENT *Genesis* 1 2
APOCRYPHA *Eccles sticus* 33:7 15—(D) OT *Ecclesiasticus* 33 7 15
7 PLATO *Timaeus* 447a-455c
8 ARISTOTLE *Interpretation* CH 13 [23 18 26] 35b-c / *Heavens* BK I CH 2 359d 360d BK I CH 12 383b-384c / *Generat on and Corruption* BK II CH 10 [336b25 34] 438d / *M taphysics* BK XII CH 10 [1 ,5 11 24] 605d-606a
9 ARISTOTLE *Generation of Animals* BK II CH I [731b 4 33] 272a b
11 N COMACHUS *A ithmet c* BK II 839d 840a
12 AURELIUS *Meditat ons* BK V SECT 8 269d 270b
16 KEPLER *Harmonies of the World* 1071b
17 PLOTINUS *Second Ennead* TR III CH 7 44c 45a CH 13 46c 47b / *Third Ennead* TR I C I 7-8 86 d / *Sixth Ennead* TR VII CH 2, 334a c
18 AUGUSTINE *Conf ssions* K VII par 16-23 48 50c / *City of God* BK V CH 11 216 d BK VIII CH 6 268d 269c BK XI CH 16-18 331a 332a CH 22 333d 334c BK XII H 2 343c d CH 4-5 344b 345b BK XIX CH 12 13 517b 520 BK XX CH 24 609a 612a / *Chris tia Doctrine* BK CH 8 626c 627a
19 AQUINAS *Summa Theolog ca* PART I Q 2 A 3 ANS 12c 14a Q 3 A I AN 14b 15b Q II A 3 ANS 49a-c Q 18 A 3 106b-107c Q 19 A 8 ANS 116a d Q 22 A 4 ANS 131c 132b Q 3 A 5 R 3 135d 137d A 7 AN 138d 140a Q 47 256a 259a Q 50 A I ANS and REP I 269b 270a A 3 ANS 272a 273b Q 57 A I ANS 295a d Q 61 A 3 316a d Q 65 A 2 ANS and RE 3 340b 341b QQ 66-72 343d 369d Q 75 A 7 384d 385c Q ,6 A 4 R P 3 393 394c Q 77 A 2 401b-d Q 106 A 4 AN 548b 549a QQ 108-109 552c 564b
20 AQUINAS *Summa Theologica* PART I II Q 49 A 4 ANS 5a 6a PART II II Q 2 A 3 ANS 392d 393c PART III SUPPL, Q 91 A 3 REP 6 1020d 1022c
21 DANTE *D vine Comedy* PARADI [97 42] 107b-d II [112-148] 109a b VII [64-75] 115d 116a [21 148] 116b-c VI I [91 14] 117d 118a XIII [52-81] 126 b XXVIII 148d 150b XXIX [13 48] 150b d
22 CHAUCER *Knight s Tale* [2987-3 6] 209 b
27 SHAKESPEARE *T o lus a d Cres d* ACT I SC III [75 139] 108d 109c
28 HARVEY *On Animal Gererat on* 491d-492a
31 SPINOZA *Ethics* RT I APPENDIX 372 d
32 MILTON *P d e Lost* BK IV [6 0-638] 165b-166a BK V [468-505] 185b-186a
35 LOCKE *Huma Underst ndi g* BK I I H VI SE T I 12 271b 272b BK IV CH XVI SECT 12 370c 371a
42 KANT *Pure Reason* 187c 188c
53 JAM S *Psychology* 671b [fn 1]

6c The rational ty or intelligibility of the universe

7 PLATO *Phaedrus* 124b-d / *Phaedo* 240b-243c / *Timaeus* 447a 477 c / *Sophist* 567a 569a / *Ph leb us* 618b 619d / *Law s* BK X 75 d 765c BK XII 797d 798a
8 ARISTOTLE *Physics* BK I CH 4 [88 5 12] 263b BK III CH 4 [3 23 33] 281a b BK VIII CH I [50b23 26] 334b CH 5 [256b20-2] 341d / *Metaphys cs* BK I CH 3 [984 8 22] 502d CH 7 [988b6-16] 506c d CH 8 [989 30-b21] 507 d BK II CH 2 [994b8-16] 512d 513a
9 ARISTOTLE *Politics* K VII CH 4 [1326 29-33] 530b-c
12 AUR LIUS *Meditat ons* BK IV SECT 4 264a SECT 27 29 266a SECT 40 267a b SECT 45 46 267b c BK V SECT 8 269d 270b SECT 3 273a BK VI SECT I 274a SECT 10 274b-c SECT 36 277c SECT 38 277c d SECT 4 277d SECT 58 279d BK VII SECT 9-11 280b-c SECT 25 281c SECT 75 285 BK VIII SECT 7 286a SECT 34 288a b BK IX SECT 8 292b BK X SECT 6-7 297a c BK XII SECT 5 307d 308a SECT 30 310a b
16 KE L R *Ep tome* BK IV 863b 872b / *Har monies of the W o ld* 1023b 1080b
17 PLOTINUS *Th rd Enn ad* TR VIII CH 1-5 129a 131d / *F fth Ennead* TR IX CH 8-14 249c 251d
18 AUGU TINE *Christian Doctrine* BK II C 32 652b-c CH 35 653b-c
28 G RT *Loadstone* BK V 104b 105d
31 S NOZA *Ethics* PART PRO 6 362a PROP 33 367b 369a APPENDIX 369b 372d p ssim P RT PRO 7 375a-c
34 NEWTON *O t cs* BK III 542a b
42 K NT *Pure Reason* 127a 128a 187c 189 200 209d 239a 240b / *Judgement* 550a 613a c passim esp 564c 565d 566c d 575b 578a 580 d 587b 588a
45 FOURIER *Theory of Heat* 173b 183a b
46 H EL *Philo phy f Right* PREF 6a 7a / *Ph lo phy of History* INTRO 156d 158c 160b PART V 361a
53 JA *Psych logy* 5 672a 862b 863b [fn 2] 870b 873a b 882a 886a 889 890a

6d The goodness and b uty of the uni erse its l and mperfect ons

OLD TE TAMENT *Genesis* 1 / *Psalms* 8 19 1-6 92 1-6 104 36 1-9—(D) *P lms* 8 18 1-7 91 -7 103 135 1-9
APOCRY HA *W s d m of Solomon* 1 14 11:24 13 1-5—(D) OT *Book f W sd m* 1 4 1 :25 13 -5 / *Eccles asticus* 6.26-30 7 7-9 39 12 3 4 :22 43 33—(D) OT *Ecclesiast cus* 16 26-3 17 6-8 39 16-41 42.23 43 37
7 PLATO *Phaed* 247b 250a / *T maeu* 447a 477a c esp 447a-448a / *Statesma* 586c 590a

(6 *The structure of the world 6d The goodness and beauty of the universe: its evil and imperfections.*)

8 Aristotle *Heavens* bk ii ch 12 383b 384c / *Generation and Corruption* bk ii ch 10 [336^{b}25–34] 438d / *Metaphysics* bk i ch 3 [984^{b}8–22] 502d bk ix ch 9 [1051 17–22] 577a b bk xii ch 7 [1072^{b}30–1073 2] 603a ch 10 [1075 12–24] 605d 606a bk xiv ch 4 [1091^{a}29–1092 9] 624a d
9 Aristotle *Parts of Animals* bk i ch 5 [644^{b}22–645^{a}26] 168c 169a / *Politics* bk vii ch 4 [1326^{a}29–32] 530b-c
11 Nicomachus *Arithmetic* bk ii 839d 840b
12 Lucretius *Nature of Things* bk ii [167–183] 17a b bk v [195–234] 63c 64a
12 Epictetus *Discourses* bk iv ch 7 233a b
12 Aurelius *Meditations* bk iii sect 2 259d 260a
16 Ptolemy *Almagest* bk i 5a
16 Copernicus *Revolutions of the Heavenly Spheres* bk i 526a 529a
16 Kepler *Epitome* bk iv 853b 887a passim esp 863b 872b / *Harmonies of the World* 1023b-1085b esp 1049b 1050a 1071b 1077b-1080b
17 Plotinus *Second Ennead* tr iii ch 16 48b-49 ch 18 49c 50a tr iv ch 16 57b c tr ix 65d 77d passim / *Third Ennead* tr ii ch 3 83d 84c ch 8 86c d ch 10–14 88a 89d / *Fifth Ennead* tr vii ch 8–9 243c 244c ch 12 13 245c 246c
18 Augustine *Confessions* bk vii par 16–23 48c 50c bk x par 8 10 73b-74a / *City of God* bk v ch 11 216c d bk viii ch 6 268d 269c bk x ch 14 307c 308a bk xi ch 4 324a b ch 16–18 331a 332a ch 22 23 333d 335c bk xii ch 2 343c d ch 4–5 344b 345b bk xix ch 11 13 517b 520a bk xxii ch 24 609a 612a / *Christian Doctrine* bk i ch 4 625b-c
19 Aquinas *Summa Theologica* part i q 2 a 3 rep 1 12c 14a q 5 a 3 25a d q 6 a 4 30b d q 17 a 1 100d 101d q 19 a 9 rep 2 116d 117d q 22 a 2 rep 2 128d 130d q 23 a 5 rep 3 135d 137d a 7 rep 3 138d 140a a 8 rep 2 140a 141a q 25 a 6 rep 3 149a 150 q 48 a 1 rep 5 259b-260c a 2 260c 261b q 49 a 2 ans 266 c q 50 a 1 ans 269b-270a a 3 ans 272 273b q 65 a 1 rep 2 3 339b-340b q 66 a 343d 345c q 7 a 1 rep 6 368b 369d q 74 a 3 rep 3 375a 377a c q 92 a 1 rep 3 488d-489d q 103 a 2 529a 530a
20 Aquinas *Summa Theologica* part ii suppl q 74 a 1 925c 926c q 91 1016a 1025b
21 Dante *Divine Comedy* paradise i [97–142] 107b d ii [112–148] 109a b viii [91–114] 117d 118a x [1–36] 120b-c xiii [52–81] 126a b xxviii 148d 150b xxix [13–48] 150b d
22 Chaucer *Troilus and Cressida* bk iii stanza 1–7 54b 55b stanza 250–253 87a b
28 Gilbert *Loadstone* bk v 104b 105d
28 Harvey *On Animal Generation* 491d-492a
31 Descartes *Meditations* iv 90b / *Objections and Replies* 214d 215b 228b
31 Spinoza *Ethics* part i prop 33 367b-369 appendix 369b 372d passim part iii 395a d part iv pref 422b d-424a
32 Milton *Paradise Lost* bk vii [548–564] 229a b
34 Newton *Principles* bk iii general schol 369b 370a
35 Berkeley *Human Knowledge* sect 109 434b sect 146 442a b sect 151 154 443b-444b
35 Hume *Human Understanding* sect viii div 79 486b-c sect xi div 106–107 499c 500a passim
37 Fielding *Tom Jones* 186c d 187d 188a
40 Gibbon *Decline and Fall* 81b-c
42 Kant *Pure Reason* 187c 188c / *Judgement* 544c 546d
47 Goethe *Faust* prologue [243–270] 7a b part ii [11,288–303] 274b 275a
48 Melville *Moby Dick* 144a 145a
52 Dostoevsky *Brothers Karamazov* bk vi 153b d
54 Freud *New Introductory Lectures* 878a b

7 The space of the world: astronomical theories concerning the size or extent of the universe

Old Testament *Job* 38 18 20 / *Proverbs* 25 3
7 Plato *Timaeus* 448d 449a
8 Aristotle *Physics* bk iv ch 5 [212^{b}11–21] 292a / *Heavens* bk i ch 5 7 362c 367b bk ii ch 4 378a 379b ch 8 [290^{a}30–^{b}11] 382a
11 Archimedes *Sand Reckoner* 520a 526b
12 Lucretius *Nature of Things* bk i [951–1113] 12d 14d bk ii [1048–1104] 28b 29 bk i [647–652] 89a
16 Ptolemy *Almagest* bk i 10b
16 Copernicus *Revolutions of the Heavenly Spheres* bk i 516a 517b
16 Kepler *Epitome* bk iv 882 886b
19 Aquinas *Summa Theologica* part i q 8 a 4 rep 3 4 37c 38c
32 Milton *Paradise Lost* bk iii [66–178] 233b-236a
34 Newton *Principles* bk iii [illegible] 367a
35 Locke *Human Understanding* bk i ch iv sect 26 160c d bk iv ch iii sect 24 320c d
42 Kant *Pure Reason* 135 137a c 160b-161d / *Judgement* 501 b
54 Freud *General Introduction* 562c

8 The end of the world

OLD TESTAMENT *Psalms* 102 25 26—(D) *Psalms* 101 26-27 / *Isaiah* 2 1 4 13 6-22 24 34 51 6 65 17-66 24—(D) *Isaias* 2 1 4 13 6-24 34 51 6 65 17-66 24 / *Daniel* 12 / *Joel* 2 1 11 / *Micah* 4 1 3—(D) *Micheas* 4 1 3 / *Zephaniah*—(D) *Sophonias* / *Zechariah* 14—(D) *Zacharias* 14 / *Malachi* 3 4—(D) *Malachias* 3 4

NEW TESTAMENT *Matthew* 3 9-12 10 14 15 11 20-24 13 33 43 47-50 24 / *Mark* 13 4 37 / *Luke* 17 20-37 21 5 38 / *Acts* 2 17 21 17 31 / *I Corinthians* 7 29-31 / *I Thessalonians* 4 15-5 4—(D) *I Thessalonians* 4 4-5 4 / *Hebrews* 1 10-11 9 26-28 / *II Peter* 3 7 13 / *I John* 2 8-19 / *Jude* / *Revelation* esp 10 6 14 15 16 21 1 27 22 13—(D) *Apocalypse* esp 10 6 14 15 16 21 1 27 22 13

9 ARISTOTLE *Motion of Animals* CH 4 [699^{b}12-700^{a}6] 234d 235a

12 LUCRETIUS *Nature of Things* BK V [91 125] 62b d [235 415] 64a 66c BK VI [535-6 7] 87c 88b

16 KEPLER *Epitome* BK IV 847b 848b

18 AUGUSTINE *City of God* BK XVIII CH 53 504d 505c BK XX 530a 560a c

20 AQUINAS *Summa Theologica* PART III SUPPL QQ 73 74 922b 935a c Q 77 A 2 945a 946b Q 88 A 3 1002d 1004b Q 91 1016a 1025b

23 HOBBES *Leviathan* PART III 230a 244b-c

27 SHAKESPEARE *Tempest* ACT IV C 1 [146-158] 543b

32 MILTON *Christs Nativity* [133 7] 4b 5b / *Paradise Lost* BK III [274 343] 141b 143a BK VII [139-161] 220 b BK XI [45-83] 300a 301a BK XII [537-551] 331a

40 GIBBON *Decline and Fall* 187c 188

41 GIBBON *Decline and Fall* 233c

CROSS REFERENCES

For Discussions relevant to the conception of the universe as a living organism as extension and thought as the objectification of mind and as an ordered community *see* CAUSE 7c GOD 7c MIND 10f-10f(1) SOUL 1a

Other considerations of the world and man *see* MAN 10c 10e

The problem of the unity or duality of God and the world *see* GOD 5d-5e 11 NATURE 1b ONE AND MANY 1b RELATION 3

The issues concerning the world s origin its eternity and its creation *see* ART 2c ASTRONOMY 8c(1) CHANGE 13 ELEMENT 5h ETERNITY 2 GOD 7a INFINITY 3e ONE AND MANY 1a TIME 2b-2c

The issue concerning divine freedom in relation to the necessity of this world and the possibility of other worlds *see* GOD 4e 5g LIBERTY 5d WILL 4b

Other discussions of the uniformity of the world s matter *see* ASTRONOMY 8a CHANGE 10c MATTER 1b MECHANICS 4a

Other treatments of the space and the size of the world *see* ASTRONOMY 5 INFINITY 3d 4a SPACE 3a

The issue concerning hierarchy or continuity in the order of nature *see* BEING 3a GOOD AND EVIL 1b LIFE AND DEATH 2 3a NATURE 3b

The consideration of the world s rationality or intelligibility *see* MIND 10a NATURE 3a

Another discussion of the beauty of the world *see* BEAUTY 7b and for the goodness of the universe in relation to God s goodness and the problem of evil *see* GOD 4f 5h-5i GOOD AND EVIL 1d 2b

The atomistic theory of the world s growth and decay *see* ELEMENT 5h and for the religious dogma of the world s end and related theological doctrines *see* GOD 7g-7h IMMORTALITY 5g PROPHECY 4d SOUL 4d(3)

ADDITIONAL READINGS

Listed below are works not included in *Creat Books of th Western World* but relevant to the idea and topics with which this chapter deals These works are divided into two groups

I Works by authors represented in this collection
II Works by authors not represented in this collection

For the date place and other facts concerning the publication of the works cited consult the Bibliograpl y of Add tional Readings which follows the last chapter of *The Great Ideas*

I

AUGUSTINE *De Genesi ad Litteram*
AQUIN S *Summa Cont a G ntiles* BK II CH 32–38 BK IV CH 90–97
—— *De Aeter itat Mu di*
G LILEO *The S der al M ssenger*
—— *Dialogo dei mass mi sistemi*
DESC RTES *The W rld* CH I II VI XIV
—— *Th Principles f Ph los phy* PAR II 21–2
HO BES *Co cer ng Body* PART IV CH 26
KANT *Cosmogony*
—— *De M ndi S nsib lis (Inaugur l D sert tion)*
—— *P olegomena to Any Future Metaphysic* par 50–54
W J MES *A Plu alist c U vers*

II

ARISTA CHUS *On th S e and Distances of the Sun and M on*
EPICURUS *Letter to Herodotus*
—— *Letter t Pythocles*
PHILO JUDAEU *On the Etern ty of th W o ld (De Aet rnitat Mund)*
—— *On the C eat on of the World (D Op ficio M ndi)*
PROCLU *The Elem nts of Theology*
SAAI IA GAON *The Book of Bel fs nd Op nions* TRE T SE I
BERNA D SYLVESTRIS *De Mundi Un vers tate*
MAI IONI ES *Th Gu de for the Perplexed* PART I CH 72 ART CH 8–16 22–23 5–30
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SUÁREZ *D putat n s Metaphysic e* XX–XXI X X XXXI (9 4)
FONT NELL *Conversat ons n the Plu al ty of W o ld*
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VOLTAIRE *Micromegas*
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—— Chain of Created Beings End of World in *A Philosophical Dict onary*
L PLACE *The System of the World*
SCHLEIERMACH R *The Ch istian Fa th* par 59
A HUMBOLDT *Cosmos*
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CLI FORD The First and the Last Catastrophe in VOL I *L ctu es and Es ays*
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JE NS *Problems of Cosmogony and Stellar Dynamics*
—— *A tr nomy a d C smog ny*
—— *The U i erse A ou d Us* CH 4 6
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WEYL *The Open World* LECT I
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—— *The Natu e of the Phys cal Wo ld* CH 4 11
—— *The Expandi g Un erse*
LOV JOY *The G at Ch in f B ing*
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—— *Ad ent res of Idea* H 7–8
PL NCK The Unity of the Physical Universe in *A Su vey of Phys cs*
—— *Th Philosophy of Phys cs* C I I
MILNE *Kinematical Relat i ty*
C S LEWIS *Out of the S lent Planet*
E T W ITTAKER *Spa and Spirit*
HARTSHO NE *The Divine R lativ ty*
VON WE ZSACKER *The History of Nature*

APPENDICES

Appendix I

BIBLIOGRAPHY OF ADDITIONAL READINGS

The Bibliography of Additional Readings provides information concerning the authors and works cited in the Additional Readings. In addition to the full name and dates of each author, the Bibliography gives as much of the following information as is appropriate to each work cited: the full title (and subtitle, if any); the name of the editor or translator, if these are identified in the recommended edition; the place of publication of the edition or translation recommended; the name of the publisher and the date of publication; the original title, the date and, in some cases, the place of composition or publication.

Since the Additional Readings are two separate lists of authors and works, and the Bibliography is a single compilation of the titles which comprise these two lists, each was constructed according to different principles. The following statement of these principles serves to guide the reader in using the Bibliography in relation to the Additional Readings.

AUTHORS' NAMES. In the Additional Readings, surnames are used, with initials added only where necessary to distinguish identical surnames; for example, J. H. NEWMAN. In a few exceptional cases, full names are used because this is the most recognizable form; for example, LEONARDO DA VINCI. The common Anglicized spelling is employed for reference to foreign names.

The alphabetical order of authors' names in the Bibliography is determined by the way in which the names appear in the Additional Readings. Initials do not affect the order; for example, J. H. NEWMAN appears in the Bibliography as NEWMAN, JOHN HENRY. When full names are used in the Additional Readings, the first name determines the alphabetical location of the author in the Bibliography; for example, LEONARDO DA VINCI is listed under "L," not under "D" or "V."

TITLES OF WORKS. In the Additional Readings, full titles are generally used. In some cases abbreviated forms are employed to avoid undue length. All subtitles are omitted.

In the Bibliography, both title and subtitle are used, and, with few exceptions, the title is given as it appears on the title page of the edition cited.

Titles are arranged in alphabetical order under the names of their authors. The alphabetization of titles disregards initial English articles (*a*, *an*, and *the*), but not prepositions (*of*, *on*, etc.).

The titles of anonymous works are placed in alphabetical order among the authors' names; for example, *Aucassin and Nicolette* appears in the Bibliography between ATHANASIUS and AUGUSTINE.

The opening words of a shortened title in the Additional Readings sometimes differ from those of the full title. In these cases, the short title precedes the full title in the Bibliography and is placed in brackets; for example, Faraday's *Various Forces of Matter* appears in the Bibliography as [Various Forces of Matter] *A Course of Six Lectures on the Various Forces of Matter and Their Relations to Each Other*.

The full title sometimes includes the names of a number of works of which the Additional Readings cite only one. If the opening words of the full title differ from those of the title in the Additional Readings, the latter is placed in brackets and precedes the full title in the Bibliography; for example, Shaw's *Crude Criminology* appears in the Bibliography as [Crude Criminology] *Doctors' Delusions, Crude Criminology, and Sham Education*. The alphabetization is determined by the bracketed title, since this is the title which appears in the Additional Readings.

TRANSLATION. The manner of citing titles in the Additional Readings indicates whether a foreign work is available in English translation. If no translation exists or is available, the title is given only in the original language. If, however, the work has been translated, the English title is always used, sometimes in conjunction with the original title. When two

titles are thus given which appears first depends in large part on the wording of the title page or the backbone of the volume which contains the translation

Some translations carry the original title in the primary place and use the translation as a secondary title Some translations use only the English title In these cases where the work is well known under its original title this is added in parentheses after the English title. *Some translations use only the foreign title In these cases an English version is added in* parentheses after the original title

In the Bibliography the titles of translated works are listed alphabetically according to the way in which they are cited in the Additional Readings If the original title is given first in the Additional Readings then only it is used in the Bibliography If the English title is given first in the Additional Readings or if only it is used then the work is listed alphabetically in the Bibliography according to the English title *In these cases the English title is always* accompanied by the original title in parentheses

Collections In the Additional Readings the titles of essays or papers which are parts of a published collection are sometimes given within quotation marks followed by the title of the collection the latter appearing in italics for example J H Newman Private Judgment in vol ii *Essays and Sketches* or McIlwain The Fundamental Law Behind the Constitution in *The Constitution Reconsidered* In these cases it is the italicized title of the collection in which the essay or paper is published rather than the quoted title of the essay or paper which is listed in the Bibliography for example the essay by McIlwain in the example above is represented in the Bibliography by the following entry under McIlwain Charles Howard *The Constitution Reconsidered*

The title of an individual essay or paper or of a single lyric poem is sometimes cited in the Additional Readings without reference to the collection in which it is published In these cases the title is italicized not quoted The individual work is represented in the Bibliography by this title and the bibliographical information includes the title of the collection in which it is published

A work listed in the Additional Readings may be available only in a collection or set of volumes with a single collective title The collective title and the number of the volume in which the cited work appears are included in the bibliographical information for example what is cited in the Additional Readings as Augustine *On the Trinity* is represented in the Bibliography by the following entry under Augustine Aurelius Saint Bishop of Hippo *On the Trinity* In Vol ii *Select Library* *Select Library* is a shortened form of the collective title of a set of volumes i e *A Select Library of the Nicene and Post Nicene Fathers of the Christian Church* Ed by P Schaff First Series 8 vols

When the full title of a collection and bibliographical information about it is given as part of the entry for a particular title subsequent listings of other parts of the same collection may refer back to the collective title by using *ibid* or *q v* or see above In other cases, only a shortened form of the collective title is given in the entry itself Here the collective title in full accompanied by bibliographical information is given in a note appended to the last entry for that author

Whole and Part Citations In all cases in which parts of a work are recommended in the Additional Readings the citation indicates these parts in a number of ways It usually gives author's editor's or translator's divisions of the work such as book part chapter section etc In the few cases where such divisions are not citable it gives page references to a particular edition When page numbers are given it is of course necessary to use this edition to find the pages cited

When author's or editor's divisions are used they are usually applicable to all standard editions of the work especially if it was originally written in English In the case of translation it sometimes happens that the translator has made his own divisions of the work Where this is so the divisions indicated must be found in the particular translation specified in the Bibliography The author's or translator's divisions are given in the same manner as similar divisions are given in the Reference sections of the 102 chapters i e BK P T CH SECT etc followed by the number of the division in Arabic or Roman numerals according to the usage of the work cited

Sometimes letters or numbers without part names signify subordinate divisions of the author's work for example Hegel *The Phenomenology of Mind* iv b (3) These are given precisely as they appear in the works themselves

In a few cases, the recommended part of an author's work is titled Such titles are placed in parentheses after the title of the work itself for example Péguy *Basic Verities* (Freedom)

Chronological Order. In the Additional Readings the titles are listed in a chronological order, or, more precisely, they are divided into two groups, each in chronological order. The first of these consists of works written by the authors represented in *Great Books of the Western World* but not published in this set; the second consists of works by other authors.

The order is determined in the same way in both groups—by the date of an author's work, not by his birth or death date. For each title listed in the Additional Readings, the determining or order date is given in the Bibliography.

For all contemporary works and works written in English which appear in only one edition, the date which follows the place of publication and the name of the publisher is the order date.

For all translations the order date is the date of the original writing or publication. This is given in parentheses along with information about the original title and its place of writing or publication.

Similarly, for works which have been recently republished or which exist in several editions, the order date is the date of the original publication or perhaps the date of composition. This date is given in parentheses. If it is the date of composition, it is so given by itself. If it is the date of a first edition or an original publication of the work, it is given with other bibliographical information.

When parts of collections—poems, essays, plays—are individually cited, the order is determined by the date in parentheses of the individual work, not by the publication date of the collection.

When the entry for a particular title in the Bibliography includes two dates, the order date is always the one in the parentheses at the end of the entry.

A question mark in conjunction with a date signifies that it cannot be determined with certainty; the letter *c* (for *circa* or "about") signifies that the date is regarded as an approximation.

In a great many cases more than one work is cited for a particular author, and often the publication date, or even the date of composition, is difficult to ascertain. This is especially true of works written in antiquity. Hence the chronological principle had to be applied with the following qualifications:

1. When two or more works by the same author are cited, they are grouped together under his name in strict chronological sequence. The chronological position of such a group of titles is determined by the date of the most recent title in the group. Hence, the whole series of individual titles in a list of Additional Readings may not be in strict chronological sequence.

2. If the work was published in the author's lifetime, the date used (if available) was that of its first publication. In the case of posthumously published works, the date of composition was used.

3. In the case of works for which no publication or composition date was available, the date of the author's death was usually substituted or, as indicating the period in which he flourished, the median date of the author's life.

4. In the case of lectures later compiled and published as books, the date the lectures were first delivered was used.

5. In the case of a work published in several volumes over a period of years, the publication date of the first volume was used.

6. In the case of collections of papers or essays published during the author's lifetime and within a short time of the first scattered publication of the individual papers or essays, the date used was the publication date of the collection. But when the collection was published posthumously or a long time elapsed between the first scattered publication and the publication of the collection, the median date of original publication dates was used. Whenever one set of dates could not be definitely determined, the other was used.

7. If a collection published posthumously represented the bulk of an author's writing, a date in the middle of his productive period was chosen.

8. When a single essay from a collection was cited, the date of the original publication of that essay was used, not the publication date of the collection.

9 In the case of single plays the date used was that of original publication or first performance whichever could be more definitely ascertained If both were equally ascertainable the earlier was used

10 The publication date of a single lyric poem was used if it appeared separately before its appearance in a collection Otherwise the date of the collection was used

Because the foregoing factors affected the application of the chronological principle the authors are frequently not listed in strict chronological order in the Additional Readings. However the precise chronological position of each author can be determined by his life dates which appear in the Bibliography A question mark in conjunction with these dates signifies that they cannot be determined with certainty the letter *c* signifies that a date is regarded as an approximation and *fl* (for *floruit*) indicates that a date given is the period when the author flourished

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APPENDIX II

THE PRINCIPLES AND METHODS OF SYNTOPICAL CONSTRUCTION

THE FOLLOWING ESSAY is intended as a supplement to the Preface The Preface is the editor s statement of the nature structure purpose and uses of the Syntopicon But as therein remarked it does not treat the intellectual and editorial problems which were faced in constructing the Syntopicon nor does it explain the principles and methods by which they were solved

Any sustained use of the Syntopicon will undoubtedly raise questions about these principles and methods Such questions may arise from a purely speculative interest or they may be prompted by a desire for more detailed guidance in the use of the Syntopicon—the ways in which it can be used the procedures to facilitate its use and the limitations to which its use is subject This essay attempts to anticipate and to give systematic answers to such questions

Since different problems were faced and different principles followed in the several parts of the work this essay is divided into the following sections

I THE GREAT IDEAS AND THE INVENTORY OF TERMS

THE GREAT IDEAS LIKE THE GREAT BOOKS represent a selection In both cases the criteria controlling the selection can be explained In neither case do the purpose and rationale of the choice preclude the possibility of disagreement even when due consideration is given to these criteria

No list of the great works of western civilization can expect unanimous and unqualified acceptance by persons learned enough to judge There may be disagreement concerning what constitutes a great book or concerning the principles which give form to the collection as a whole But even when such disagreement is absent there are likely to be differences with regard to the inclusion or exclusion of particular authors and titles

Under the circumstances the most that can be hoped for is that these differences concern no more than a small fraction of the whole No greater measure of

acceptance need be sought for a list of great books than assent to a very large proportion of its contents by those who understand the purpose and criteria governing the selection The editors believe that the 74 authors and the 443 works[1] included in *Great Books of the Western World* form a collection which meets this test

The same test applies to the list of great ideas which are the titles of the 10 chapters of the Syntopicon The editors have reason to believe that the number of exceptions which might be taken to this list by way of addition or subtraction would be inconsiderable as compared with the total But as with the great books so with the great ideas the application of this test presupposes some understanding of the criteria of their selection

The purpose and principles underlying the compilation of *Great Books of the Western World* are stated and illustrated in the introductory essays that comprise Volume 1 of this set Here we shall undertake to explain the compilation of *The Great Ideas* The two explanations are mutually supporting

Both the great books and the great ideas were chosen to represent the unity and continuity of the tradition of western thought The great books are those which deal imaginatively or intellectually with the ideas which are fundamental throughout this whole tradition Any important work—ancient mediaeval or modern—will necessarily be concerned with these ideas in some way What distinguishes the great books is the originality the profundity and the scope of their treatment of these ideas Other books important in some special field of learning may have these qualities with respect to one idea or even to several related ideas but the great books possess them for a considerable range of ideas covering a variety of subject matters or disciplines and among the great books the greatest are those with the greatest range of imaginative or intellectual content

It seems fitting that the ideas which are the central insights and the richest concepts of western thought should be used as the touchstone—or at least as one of the principal criteria—for selecting the great books In the deliberations leading to the selection of *Great Books of the Western World* the Board of Editors applied this test to particular authors and works The reader can apply it for himself by comparing the 443 works which are published in this set with the 2600 or more important books listed in the Bibliography of Additional Readings

It is no less fitting that the books which are creations of the highest literary art and expressions of the most powerful thought in our tradition should be used to

[1] In the T bl of Autl T tl d A th D is C ted wh h con lud th Expla tion of R f ce Styl th mb f tho ames l ted 7 H m l n M d so d J y th th rs of *Th F der l* e list d b k t be se th r mes d n t ctually ppe in th R f c ces. The numbe f t tle list d 437 n t 443 Th cr te d t d te m th numb f nd idual w rks in l d d *G B k f the W t rn World* t th m as the p cipl f ll w d l t g the sep t t tl t c t th R f e es F x mpl l play f Shakespe e h ssay f M t g e ea l f Pl t h *L* w gard d n d d l w rk wh reas Chauc *Ca erb ry T l* as t d as gl k as w e Sh k pea e so et B t th R f ces f reaso s of en en the t tles f p t l essay by M t g r t t d nst ad the c ll cti t tle *Essay* is sed B t th t tl f th p t la l es nd th t tl f the p t la t l Pl t rch a d Ch are t d He th d ff b tw the mb f d t t t tl ted th R f e ce d the numb f d d l w ks wh h mp *G t B k f the W ter W ld*

determine which are the great ideas in that tradition The work of constructing *The Great Ideas* began with a list much longer than the 102 chapter titles of the Syntopicon in its final form During the first two years of preliminary work the editorial staff operated with this list of possible terms progressively reducing the number to the 102 which were finally selected

The great majority of terms eliminated were those which did not appear to receive extensive or elaborate treatment in the great books They were term that did not seem to have a lively career—a continuous and complex development throughout the three thousand year tradition of the great books The editors used the actual content of the great books as the test whereby to separate a small set of truly great ideas from a much larger number of important concepts or notions The reader can apply this test himself by comparing the 1800 concepts listed in the Inventory of Terms with the 102 ideas that are treated as the principal terms in the Syntopicon

It seems circular to say that the great books are those which deal most fully and significantly with the great ideas and that the great ideas are those dealt with most fully and significantly in the great books Circularity in definition is not however always a grievous fault We recognize for example the good sense of saying that among works of art the best are those preferred by persons of the best taste and greatest critical competence yet we also find it necessary to say that among the critics of an art the best and most competent are those who like the best works best That each is used to measure the other does not invalidate the measure for anyone who perceives that the same principle—the principle of artistic excellence—is operative though differently in both measurements So too the same principle—that of cultural significance in the tradition of western thought—determines which are the great books and which the great ideas When this is understood the use of each to measure the other will seem justified

The editors were keenly aware of this problem during the period in which the two lists—of the great books and the great ideas—were being shaped and given final form each by reference to the other But the record of their deliberations will also show that the circularity was far from complete That it deals in an important way with the great ideas of western thought *is not the only criterion of a great book* That it receives significant treatment in the great books of the western tradition *is not the only criterion of a great idea* Other criteria were present in the construction of both lists Yet even these may not be altogether independent For example the recognition that the great books are not merely monuments of our literary and cultural past but also books of contemporary eminence parallels the recognition that the great ideas are not merely the vehicles of traditional thought but also the notions which men must use today in thinking about contemporary realities The fundamental fact which somehow emerges is that the greatness of the books and the greatness of the ideas derive from the same source

THE CORRELATION BETWEEN THE GREAT IDEAS and the great books is thus an answer to the question Why were these 102 terms chosen as the basic divisions of

the Syntopicon? If the books had been radically different the ideas would have been different also If for example *world culture* were now an historic reality and if a set of books were chosen to represent the unity and continuity of a *world tradition* the list of great ideas would probably differ in a number of striking respects But it is the western world not the whole world of which these are the great books and the great ideas

It is the western tradition *as a whole* that the great books *as a set* represent But each one of the great ideas not the total collection of them stands in relation to the whole tradition represented by the set One indication of the greatness of these ideas is that each of them pervades the entire tradition If for example the set of great books had been restricted in any way—to represent the culture of antiquity exclusively or only modern thought or to represent what is sometimes called the scientific tradition as opposed to the tradition of humane letters —then a somewhat different set of terms would have had to be chosen as the great ideas of that partial or sectarian tradition

Not all of the great ideas are equally extensive in range Not all have equal vitality in all the epochs of western civilization or equal significance for all its intellectual phases In this sense they are not all equally great

Ideas like KNOWLEDGE MAN GOD have the maximum range pervading all the major periods and also all the divisions of learning or kinds of literature Ideas like JUSTICE LIBERTY STATE and WEALTH on the one hand or like MATTER SPACE TIME and WORLD on the other have universality insofar as they are basic concepts in all periods of the western tradition They are discussed from one end of the great conversation to the other But they are not discussed in *all* the great books for they are not relevant to every imaginative or intellectual consideration

Still other ideas do not run evenly throughout the entire tradition OLIGARCHY PROPHECY and ANGEL, for example have a more lively incidence in ancient or mediaeval than in modern thought EVOLUTION and PROGRESS are examples of an opposite sort There may be anticipations of these ideas in ancient and mediaeval thought but not until the modern period do they become dominant notes in man s view of nature and history

These exceptions to the universality—in time and interest—of the great ideas testify to the principle followed in selecting the 102 basic terms of the Syntopicon For the most part these terms have the requisite universality The reader can verify this for himself by observing the distribution of authors and books cited in the Reference sections of the various chapters He will find that authors of every period have a voice in the conversation and that almost every sort of book is represented—poetry science history philosophy theology He will also find however that except for the truly ubiquitous ideas one or another branch of learning or literature may predominate and sometimes a whole field of inquiry may be absent Some ideas by the intensity of their significance for one epoch or one department of human thought make up for their limited range or scope To admit these to the company of the great ideas the requirement of universality was relaxed

The varying lengths of the 102 chapters ranging as they do from 11 to 62 pages cannot be taken without some qualification as a measure of the universality of these ideas in the tradition of western thought The length of a chapter does not depend *only* on the volume of the references—the number of authors books and passages *cited it depends also upon the complexity of the idea that is upon the* number of topics required to state all the related meanings problems or issues which have been discussed in the name of that idea But these two factors taken together do account for the size of each chapter The varying chapter length therefore indicates a gradation among the 102 great ideas with respect to their universality or ubiquity in extent and to their interior complexity or manifold significance in intent

IT IS IMPOSSIBLE TO DEFINE ANY MINIMUM degree of range and amplitude which distinguishes the ideas selected for syntopical treatment from the hundreds of other terms that were eliminated in the early stages of the work With regard to the vast majority of those eliminated a clear and certain judgment was possible in the light of criteria already stated There were of course borderline cases in which the decision to include or exclude a term remained doubtful even after prolonged deliberation Such decisions had to be made finally in a somewhat arbitrary fashion in terms of practical criteria not yet stated One of these for example was the necessity for some limitation on the number of chapters In some cases the significance of the dropped term might be adequately covered in the analysis of other terms which more clearly deserved inclusion

The first list of possible terms numbered upward of 700 It might serve some purpose to present a brief sampling of the terms which while among the most likely candidates for inclusion were discarded in the early stages of the work

analysis	generation	persuasion	society
axiom	grammar	population	sovereignty
authority	growth	possibility	spirit
becoming	harmony	poverty	style
belief	heredity	power	substance
character	hero	prediction	superstition
choice	hope	probability	synthesis
conquest	ideal	production	taxation
contemplation	imitation	profit	teaching
creation	inference	property	*temperament*
criticism	instinct	providence	theory
deduction	intuition	purpose	thought
doubt	jurisprudence	reality	tolerance
environment	learning	republic	tradition
equality	marriage	revelation	use
essence	methodology	revenge	utopia
equity	money	*rights*	*value*
fact	nutrition	ruler	volition
faith	obedience	salvation	wages
fallacy	organism	self	woman
force	ownership	sex	worship
friendship	patriotism	skepticism	youth

The penultimate list consisted of 115 terms Thirteen of these were finally dropped analogy biology body community empire genus and species health and disease individual light music order person tragedy From that point on the words or pairs of words chosen to express the great ideas numbered 102

THE TWO MEASURES OF INTRINSIC GREATNESS—scope and significance—do not fully explain all the eliminations from the original list Certain arbitrary factors were operative in the final determination of the 102 chapters of the Syntopicon

In the first place a number of words do not appear as chapter titles simply because they are synonyms of words selected as principal terms For example freedom motion conflict obligation and universe were discarded in favor of their synonyms liberty change opposition duty and world

In the second place certain words were paired either for convenience of treatment or because they are usually discussed together in the great books Sometimes these words represent fundamental opposites good and evil life and death necessity and contingency one and many pleasure and pain same and other universal and particular virtue and vice war and peace and sometimes they represent closely associated terms custom and convention memory and imagination sign and symbol Opposites were not always made explicit especially if one of the pair was a purely negative term (*e g* justice and injustice prudence and imprudence temperance and intemperance) and this policy affected the decision not to pair cowardice with courage Nor were closely associated terms always indicated in the chapter title For example becoming might have been associated with change friendship with love society with state or despotism with tyranny just as symbol is associated with sign or convention with custom The decision in each of these cases rested upon considerations germane to the treatment of a particular chapter in itself and in its relation to other chapters

With one exception the decisions made with regard to synonyms and the pairing of words do not affect the number of chapters but only the character and the number of words which appear in the chapter titles That one exception is the pairing of memory and imagination each might conceivably have been the title of a separate chapter Joining them in a single chapter avoided a certain amount of duplication in the topics and references which would have appeared under each

This leads us to a third principle—a principle of convenience—which affected the number of chapters The number might have been made smaller by subordinating certain terms to others among the 102 For example all the forms of government (aristocracy democracy constitution monarchy oligarchy tyranny) might conceivably have been treated as topics or groups of topics in the chapter on GOVERNMENT all the virtues (courage justice prudence temperance wisdom) might have been similarly treated in the chapter on VIRTUE AND VICE But convenience dictated a separate treatment of each of these notions in order to avoid the excessive complexity and unwieldy length which would have re-

sulted from the number of topics and the volume of the references these chapters would have had to contain

The number of chapters might also have been expanded as for example by dividing MEMORY AND IMAGINATION into two chapters or by breaking a large and complex chapter into a number of smaller ones This might have been done in the case of BEING by substituting chapters on existence essence substance reality The reason which operated against such multiplication of chapters was (as already stated) the desire to avoid excessive duplication among topics and references

To the extent that such pragmatic criteria or reasons of convenience were operative the number 102 and the list of terms chosen as chapter titles are somewhat arbitrary But this unavoidable arbitrariness does not affect the character of the terms selected as the great ideas of the western tradition Their character would have been the same had the number been 92 or 112 It would have been the same had other words been used to express the same meaning—if for example freedom had been used instead of liberty or universe instead of world What is not arbitrary in short is the distinction between the character of the terms selected and the character of those eliminated because they do not function as major centers or pivots of discussion in the great books

ALL THE ELIMINATED TERMS and many more appear in the Inventory of Terms The Inventory has 1798 entries whereas the original list of possible terms numbered less than 1000 In analyzing the basic concepts it was discovered that terms not thought of as candidates for primary treatment had significance as subordinate concepts

The composition of the Inventory of Terms tends to throw light on the character of the great ideas and to confirm the distinction between primary and subordinate concepts But it must first be observed that not all of the words that appear in the Inventory of Terms express subordinate concepts Some as we have already seen are synonyms for the words chosen to express the great ideas and some are words which if not strictly synonyms have a significance coordinate with that of the great ideas Some have even more generic meaning than the chapter words and some are chapter titles

The concept of a republic or of republican government is for example coordinate with the idea of a constitution or of constitutional government but the idea of CONSTITUTION with its correlative notions of constitutional law and the principle of constitutionality better served the purpose of analyzing this whole complex of notions as they appear in the great political and historical books of the western tradition In other cases a word which at first seems coordinate in meaning is found on closer examination to have less generality at least so far as the great books are concerned This is true of becoming as compared with change friendship as compared with love or atom as compared with element In their greater amplitude the chapters on ELEMENT LOVE and CHANGE provide places for adequate treatment of these subordinate concepts

Certain terms which may at first appear coordinate with the 102 great ideas are actually more rather than less general in their significance "Society" and "thought" for example express concepts which require a number of chapters in part or whole for their adequate treatment The entry under "thought" in the Inventory of Terms refers the reader to a large number of chapters such as IDEA JUDGMENT LANGUAGE MEMORY AND IMAGINATION MIND REASONING The word "thought" is not only more general but also more indefinite these chapters cover the discussion of thought in the more definite terms in which it occurs in the great books

The situation with respect to "society" is not quite the same The entry under "society" in the Inventory of Terms refers the reader to a number of chapters of which two—FAMILY and STATE—deal with the two main types of society or community (*i e* the domestic and the political) For the most part the great books discuss the family and the state rather than the more generic notion of society or human association as such For the most part they do not discuss primitive societies which are strictly neither families nor states and if they consider other types of association such as economic corporations or religious communities they do so in relation to the family or the state The generic concept of society is treated fully at the generic level only in the comparatively recent literature of sociology and anthropology

It should be clear from these two examples that words expressing concepts more generic than the great ideas are relegated to the Inventory of Terms according to the same principle as that applied to words expressing subordinate concepts In both cases the standard is set by the range and level of the discussion in the great books

With a few exceptions such as "thought" and "society" (which are more generic) or "republic" (which is coordinate) the vast majority of the words listed in the Inventory are subordinate terms Many are words which actually appear in the phrasing of one or more of the topics under the great ideas or they may be synonyms for these words Some are words which are implied by the meaning of one or more topics Such words and their synonyms are listed in the Inventory as well as words verbally present in the topics

AS THE 2987 TOPICS OF THE SYNTOPICON state the themes which are discussed under the great ideas so the words listed in the Inventory represent the terms in which those themes are discussed For both the ultimate point of reference is of course the content of the great books and of the tradition they represent Through the intermediation of the topics the terms of the Inventory reflect the same principles of selection as do the great ideas This accounts for differences between the Inventory of Terms and other basic word lists such as Baldwin s *Dictionary of Philosophy and Psychology* Lalande s *Vocabulaire technique et critique de la philosophie* the general terms contained in the classified listing of articles in the *Encyclopaedia Britannica* and the abstract titles under the classification of articles in the *Encyclopaedia of the Social Sciences* All of these necessarily include technical terms

of highly specialized import in particular fields of inquiry They also tend to reflect predominantly the state of knowledge and opinion in the 19th and 20th centuries—the latest developments of the tradition rather than the whole of it

The Inventory of Terms consists mainly of words in common use It is not the vocabulary of philosophy science or any other special study It is the basic vocabulary of ordinary speech concerning ideas which b long not to the last century or to the present day but to the collective common wisdom of mankind Though most of its words have currency in contemporary English speech they also have currency in the thought of thirty centuries no matter how they were verbally expressed in a variety of languages living and dead

An entry in the Inventory of Terms usually consists of a term followed by an enumeration of the topics in which that term is a significant element There are two exceptions to this procedure which deserve comment

For most of the terms listed the relevant topics are cited in a single group in the alphabetical order of the chapters in which they appear But for a certain number of terms the topics are divided into two groups each arranged alphabetically In these cases topics of immediate relevance are distinguished from those of remote relevance The former state themes or issues in which the term under consideration is central to the discussion the latter those to which it tends to be peripheral

The second exception is the citation of whole chapters in addition to individual topics from other chapters When whole chapters are cited they are placed first in the enumeration because all their topics are of maximum relevance to the term under con ideration The procedure of citing whole chapters was adopted initially in the construction of those entries which are the names of the great idea themselves It was extended to words which are synonyms for the chapter titles and to a small number of other words which express terms of considerable magnitude

The reason for the inclusion of the chapter names and their synonyms in the Inventory of Terms should be immediately apparent Each of the great ideas is involved in the meaning of topics in other chapters The fact that each of the great ideas is implicated in the analysis of many others shows the interconnection of the ideas a point to which we shall return presently It also helps to indicate the difference in magnitude—in topical range—between the great ideas and all subordinate notions

In almost every case the names of the great ideas (or their synonyms) have a greater number of topics cited for them in the Inventory of Terms than do other terms This shows that they are the major terms in the tradition of western thought They are the terms with the most varied and manifold significance and with the greatest incidence in the discussion of important problems It might almost be said that they are the unavoidable terms in the principal areas of discourse That subordinate terms have a much more restricted topical range confirms the difference in discursive amplitude between them and the great ideas

The reader can therefore verify for himself by examining the Inventory of Terms the difference between the great ideas and all other terms He need only

compare the number and variety of topics cited for the great ideas and for all other terms By the same criterion he can also order all the other terms in the Inventory according to the degree to which they approach the great ideas in topical range He would find that the class of terms which by this test most nearly approximated the great ideas is not large—probably much less than one hundred of the 1798 terms in the Inventory These would be the borderline terms—the few whose omission from the company of the great ideas might be disputed

The 102 chapters of the Syntopicon present the great ideas in alphabetical sequence The Inventory of Terms is also alphabetically arranged partly for convenient reference and partly to avoid the formulation of any rigid systematic order among the great ideas and their subordinate terms Many systematic arrangements of these concepts are possible and the adoption of any one of them would be prejudicial to the others The alphabetical arrangement admits all possibilities and conceals all alike On the other hand as we have just seen the Inventory of Terms reveals as well as conceals the relation of the great ideas to one another and of other terms to them But the relationships revealed in the Inventory are not systematic in the sense of giving one idea or set of ideas logical priority over others

The Inventory of Terms merely shows the subordination of one concept to another insofar as the one enters into the topics which express the content of the other But this sort of relationship between two great ideas does not place them in a fixed systematic order for each may be subordinate to the other that is each may be involved in the topics of the other Liberty for example is involved in the topics of Justice and Justice in the topics of Liberty Infinity is involved in the topics of Space Time Matter and World and they in turn are involved in the topics of Infinity

Other types of relation among the great ideas are indicated in the Introductions and the Cross References which are respectively the first and fourth parts of each of the 102 chapters Both of these parts of the Syntopicon are discussed at greater length subsequently in this Appendix Here it is sufficient to point out that the interconnection of the great ideas which the Introductions and the Cross References suggest is an order no more systematic than that indicated by the Inventory of Terms

The Cross References in one chapter call the reader s attention to similar or related topics in other chapters A particular Introduction usually refers the reader to other Introductions for a fuller consideration of certain matters or for the exposition of affiliated points That neither of these types of connection sets up a systematization of the ideas is simply shown by the fact that neither places them in a unique logical order The Introduction and the Cross References merely show that one idea is related to a number of other ideas without specifying the logical character of the connection Without such specification the network of connections set up by the Inventory of Terms the Introductions and the Cross References cannot become a systematic order

A systematic order of concepts belongs properly to the exposition of a doctrine The tradition of western thought contains a variety of doctrines many of them conflicting Of these certainly of the principal ones the great books provide the best and fullest exposition and their conflict appears most sharply whenever the voices in the great conversation engage in explicit controversy *The Great Ideas* as a syntopicon of the great books must therefore avoid so far as that is humanly possible any trace of systematic order In no other way could it present the whole tradition free of prejudicial coloring by any one of its parts In no other way could it embrace every variety of position without the distortion that would necessarily follow from a stronger attachment to one than to others

Detachment is the essence of a purely dialectical treatment of ideas a opposed to the dogmatic exposition of a particular doctrine—dogmatic not in the sense of being without rational foundation or defense but simply in the sense of being attached to some particular order of ideas in preference to all others The explanations which follow concerning the construction of the Outlines of Topics and the manner in which the Introductions were written will offer further evidence of the dialectical detachment that was sought in every phase of this work because it was necessary for carrying out the conception of the Syntopicon That dialectical detachment is preserved by the alphabetical ordering of the great ideas insofar as it alike admits or conceals all possible orderings and it is confirmed by the non systematic character of the various connections among the great ideas as these are indicated by the Inventory of Terms the Cross References and the Introductions

THESE CONNECTIONS THOUGH NOT SYSTEMATIC are neither haphazard nor insignificant They point to various constellations of ideas which are the conceptual patterns of major fields of learning or inquiry

Consider for example the interconnection of the ideas of GOVERNMENT FAMILY STATE LAW CONSTITUTION DUTY JUSTICE LIBERTY MAN CITIZEN SLAVERY PUNISHMENT WAR and REVOLUTION and of these with the ideas of particular forms of government such as ARISTOCRACY DEMOCRACY MONARCHY OLIGARCHY and TYRANNY These ideas have more complex and intimate relations with one another than any of them has with such ideas as ANIMAL CHANCE DEFINITION EVOLUTION MATTER SENSE SOUL or WORLD Their interconnection forms that constellation of concepts which characterizes the field of political thought and distinguishes it from all other field

The interconnection of the ideas of LABOR WEALTH JUSTICE LIBERTY SLAVERY FAMILY STATE REVOLUTION WAR and perhaps DEMOCRACY and OLIGARCHY forms the constellation of concepts which characterizes the field of economic thought To take a more sharply contrasting example the interconnection of the ideas of GOD MAN IMMORTALITY FATE PROPHECY SOUL SIN WORLD RELIGION and THEOLOGY and the relation of these to such ideas as GOOD AND EVIL DUTY HAPPINESS VIRTUE LAW and PUNISHMENT constitute the conceptual pattern of religious thought

In none of the preceding examples is the enumeration of ideas intended to be exhaustive In each case only the principal concepts are mentioned But even if to these were added all the peripheral concepts—those having any appreciable degree of relevance to the subject matter—many of the great ideas would still be omitted from the constellation of concepts involved in a particular subject matter or field of inquiry This indicates that every idea is not associated equally with every other All belong together in the single intellectual firmament of western thought but they also form separate sub groups or constellations which delineate traditional subject matters

Yet one may wonder whether every great idea is not in some way related to every other—if not directly then at least through the mediation of other ideas Some evidence on this point is afforded by the examples given above Politics and economics have common ideational elements The concepts of JUSTICE, LIBERTY SLAVERY FAMILY STATE REVOLUTION WAR DEMOCRACY and OLIGARCHY are involved in both fields of thought Politics and religion also have common ideational elements (*vi* MAN DUTY LAW PUNISHMENT) By this measure they would seem to overlap less than do politics and economics But whether they overlap more or less it is through the relation of the various fields of inquiry to one another that each of the 102 great ideas has some degree of relevance to all the others

At different times in the tradition of western thought the major fields of inquiry or subject matter have been differently conceived and either more broadly or more narrowly defined According to different doctrines the relation of the fields to one another—the order of the sciences the general groundplan of learning—is differently construed Hence it would be prejudicial and presumptuous to advance here a definitive formulation of concepts central and peripheral which separate or relate the traditional fields of inquiry such as politics ethics or morality economics religion and theology metaphysics physics biology or the philosophy of nature psychology anthropology or the philosophy of man epistemology or the theory of knowledge history and the philosophy of history the liberal arts of grammar rhetoric and logic poetry and the philosophy of art

By using the Syntopicon the reader can discover for himself the grouping of the great ideas in the various patterns appropriate to distinct and related subject matters In doing this he will be aided primarily by the Cross References and the Introductions and also to some extent by the Inventory of Terms Instead of constraining him by dogmatically imposing one against any other construction of the fields of learning the Syntopicon leaves the reader free to find and even facilitates his finding the various and often conflicting constructions that have been made in the tradition of the great books

IT MAY BE OBSERVED THAT OF THE VARIOUS FIELDS OF LEARNING named above some are also names of great ideas whereas others which seem to be of equal importance are not This fact requires some explanation It also raises the question whether the great ideas are all ideas in the same sense Is the idea which signifies

a field of learning or a subject-matter such as mathematics physics or theology the same sort of conception as the ideas which signify basic notions in that particular field? Is the chapter on PHYSICS for example on the same level with the chapters on CHANGE ELEMENT MATTER SPACE TIME?

Clearly there is a difference between these two orders of ideas The conception of a science a subject matter or a field of inquiry is obviously different from the conception of the objects or realities considered in that field One of the basic problems throughout the tradition of western thought has been the division of human knowledge the definition of the departments of learning the nature and order of the arts and sciences Hence among the great ideas certain ideas have developed in the course of thinking about this problem. They are conceptions of the nature of particular sciences or subject matters

But not all subject matters which appear in the most recent classifications of the sciences are discussed at sufficient length in the great books to warrant their taking their place among the great ideas of the whole tradition Psychology for example does not receive as much attention as physics and so there is a chapter dealing with the conception of physics but none dealing with the conception of psychology Instead the consideration of psychology appears primarily as a group of topics in the chapters on MAN and SOUL Grammar likewise does not receive the attention that logic and rhetoric do accordingly there are chapters dealing with the arts or sciences of logic and rhetoric but none dealing with grammar Instead grammar is considered in a group of topics in the chapter on LANGUAGE and also occurs in the chapters on LOGIC and RHETORIC in topics which treat the relation of grammar to these other arts

By consulting the Inventory of Terms the reader will be able to discover in which chapters and under which topics consideration is given to the arts sciences or branches of learning whose names do not appear among the 102 chapter titles It may be useful however to enumerate those chapters which deal with branches of learning or fields of inquiry They are ASTRONOMY DIALECTIC HISTORY LOGIC MATHEMATICS MECHANICS MEDICINE METAPHYSICS PHILOSOPHY PHYSICS POETRY RELIGION SCIENCE and THEOLOGY

With a few exceptions *each of these chapters is devoted entirely to the consideration of a discipline or subject matter*—its definition its scope its principles methods and problems The exceptions are the chapters on ASTRONOMY HISTORY MECHANICS and MEDICINE which are concerned *only in part* with various conceptions of the nature principles and methods of the disciplines named In part they *also* include topics which state issues not *about* these sciences but *within* them—issues about the objects studied in these sciences

The chapter on ASTRONOMY for example includes discussions of celestial phenomena in general and of particular heavenly bodies the chapter on HISTORY includes discussions of the processes and patterns of historical change the chapter on MEDICINE includes discussions of the nature causes and classification of diseases and the general theory of health and considerably more than half the chapter on MECHANICS deals with the basic notions in the science of mechanics and the

concepts and problems of various branches of physical science This part of the chapter on MECHANICS is (along with such chapters as SPACE TIME and QUANTITY) the complement of the chapter on PHYSICS which concerns itself entirely with the character of physics as an experimental science and as a philosophy of nature

The other chapters which are restricted to the consideration of the character and method of particular disciplines also have their complements The chapters on DEFINITION HYPOTHESIS IDEA INDUCTION JUDGMENT OPPOSITION PRINCIPLE and REASONING for example are complementary in the sense indicated to the chapter on LOGIC the chapters on INFINITY QUANTITY SPACE and TIME are complementary to the chapter on MATHEMATICS and so on for each of the chapters which revolve around the nature and methods of a particular discipline

That the chapters on ASTRONOMY HISTORY MECHANICS and MEDICINE are treated somewhat differently from the rest (being mixed chapters rather than exclusively concerned with the idea of a science or of its subject matter) is explained in the same way as the fact that the sciences of economics and psychology are treated in topics subordinate to the ideas of WEALTH and MAN On purely logical grounds these disciplines or branches of learning may be considered as important as ASTRONOMY MECHANICS or PHYSICS but as a matter of historic fact they have not been equally subjected to analysis definition and discussion in the tradition of western thought especially when that is taken as a whole All such differences in treatment reflect the actual content of the great books rather than any theory developed apart from the books or according to the bias of one period or phase of the tradition

WE HAVE NOW SUFFICIENTLY EXPLAINED the selection of the 102 great ideas and their relation to one another and to the concepts enumerated in the Inventory of Terms We have distinguished whatever was based in the treatment of the ideas on purely pragmatic considerations or reasons of convenience from policies which were based on theoretic principles reflecting the conception of the Syntopicon itself We have observed a number of differences among the great ideas that all are not equally great not equally complex in structure or extensive in scope that they vary in the range of subject matters to which they pertain or in the emphasis they receive in different periods or phases of the western tradition that they are not all on the same level some being concepts of the branches of human learning others concepts of the objects of human inquiry

One more point of difference among the great ideas remains to be mentioned That is the difference between what might be called the easy and the difficult ideas The measure of this difference is the number of distinct meanings which have been attached to the name of an idea in the tradition of the great books

Two ideas represent the extremes between which all the rest vary One extreme is the chapter on IDEA it almost seems that no two of the great books which expound a theory of ideas use the word idea in the same sense At the

other extreme is the chapter on PUNISHMENT the authors of the great books may differ in their theories of the purpose or use of punishment but they differ very little if at all on the meaning of the word punishment

In proportion to the degree of their systematic ambiguity the great ideas are more or less difficult as subjects for syntopical treatment The names of the great ideas like other words have systematic ambiguity when their various distinct meanings are related according to some principle That the ambiguity be systematic is obviously indispensable to the unity of each chapter dealing with a great idea To preserve the unity of a chapter some intelligible relation must obtain among all the senses in which its principal term is used in the topical development of the idea *The unity of each chapter depends on the existence of a common thread underlying all the twists in meaning that its principal term undergoes*

Sheer equivocation—that is the use of the principal term in two absolutely unrelated meanings—would divide the chapter into two parts with no reason for their being together except a purely verbal identity of accidental origin Hence in proportion as the word expressing an idea is more ambiguous the danger is greater that the systematic ambiguity may verge upon sheer equivocation

The handling of the systematic ambiguity itself and the avoidance of sheer equivocation are the two aspects of the semantic difficulty encountered in treating almost all of the great ideas because of their manifold or complex significance The solution of this difficulty—different in different chapters according to the precise nature of the semantic problem in each—was achieved by means of the topical subdivision of the great ideas The order and relation of the topics made it possible to take care of the order and relation of the various meanings of the idea A fuller statement of the way semantic difficulties were overcome in the construction of the *Syntopicon* belongs therefore to the next section of this essay which deals with the Outlines of Topics

II THE OUTLINES OF TOPICS AND THE CROSS-REFERENCES

THE TOPICS ARE THE BASIC UNITS OF THE SYNTOPICON They perform a double function The Outline of Topics in each chapter is the analysis of a great idea setting forth its various meanings its themes and problems and the individual topics serve as the immediate headings under which are assembled the references to the discussion of each particular subject in the great books The topics are the major subdivisions of the discussion in the sphere of each of the great ideas as the ideas are the main divisions of the whole discussion in the great books As each idea represents a general field of discourse—a domain of learning and inquiry—covering a variety of related themes and problems so under each idea the various topics represent the themes and problems which are the particular subjects of discussion in that field

To understand how the topics perform these two functions—that of analyzing the ideas and that of providing headings for the references—it is necessary first to consider the nature and variety of the individual topics and second to exam

ine the structure of the Outlines of Topics in the light of the principles which determined the order of the topics the selection of certain topics and the omission of others

A topic is essentially a subject for discussion The Greek word *topos* from which topic is derived literally means a *place* Its literal meaning is retained in such English words as topography and topology which signify the study of physical or geometrical places The conception of a topic as a subject for discussion is a metaphorical extension of this root meaning A topic is a logical place it is a place where minds meet to consider some common problem or theme

The minds may agree or disagree they may argue the matter from different points of view they may contribute to the discussion in a variety of ways—by offering examples by proposing definitions or hypotheses by stating analyses or arguments by debating what has already been said or by advancing a new view But whatever form each contribution takes it must be relevant though it need not be relevant in the same way or to the same degree The various contributions are relevant to each other through their relevance to the common theme or problem and this gives unity to the variety of things being said

A topic then is a place where minds meet through being relevant to a common subject of discussion It is a place at which an intelligible exchange of thought insight or opinion can occur We recognize this when we refer to the topics of a conversation and thereby we also acknowledge that a conversation in order to be good must have topics The more conscious it is of its topics the better a conversation is the better it can sustain relevance as it shifts from theme to theme

In this sense the conception of the Syntopicon is inseparable from the conception of the tradition of western thought as a single great conversation in which the best minds of every period and persuasion have participated As the units of any good conversation are its topics so the units of the great conversation are the 3000 topics under which the Syntopicon cites relevant discussion in the great books If the notion of the great conversation had been a myth the Syntopicon could not have been constructed at all To say that these two volumes of *The Great Ideas* make possible a syntopical reading of the great books is to say also that they bear witness to the actuality of the great conversation

The traditional conception of a topic belongs to the logic of discussion—of dispute controversy or any other exchange of opinion among men It is not necessary that every topic be disputed for it to be true that every topic is necessarily disputable Wherever a difference of opinion is possible or wherever a variety of relevant views is conceivable there a topic can be formulated for there will be a meeting place for discussion According to this understanding of the nature of a topic the 3000 topics of the Syntopicon are the meeting places of western thought They are not possible but actual topics Discussion of each of them can be found in the tradition of the great books

To accord with its logical function a topic must have a certain grammatical and perhaps even rhetorical form For example a topic is not a proposition It

neither asserts nor denies anything It is neither true nor false It would be inappropriate therefore to state a topic in a declarative sentence

If we consider the relation of law to liberty we can assert in a proposition that the supremacy of law *is* the principle of political liberty or we can deny this if we say it *is not* the principle But topic 7b in the chapter on LAW does neither and permits both This topic— The supremacy of law as the principle of political liberty —merely presents for consideration one traditional formulation of the relation of law to liberty

It may be supposed that if a topic states a problem it should be put in the form of a question For example LAW 7b might have been expressed thus Is the supremacy of law the principle of political liberty? or Whether the supremacy of law is the principle of political liberty? But the interrogative form of statement is almost as restrictive as the declarative It seems to call only for a Yes or No answer If the issue were as simple as this it might have been most explicitly expressed in the form of a dilemma *Either* the supremacy of law is the principle of political liberty *or* it is not But a dilemma of this sort does not exhaust all the relevant possibilities It is therefore a bad phrasing of the topic and at the same time indicates what is wrong with the interrogative phrasing It limits the topic to one question or one issue

The topic concerning the relation of law to liberty raises more than one question Its phrasing permits such questions as In what sense is the supremacy of law the principle of political liberty? Furthermore as phrased the topic allows for more than an affirmation or a denial It permits the expression of doubt on the subject it permits the formulation to be entertained as an hypothesis for the purpose of seeing what consequences follow it is open to a variety of explanations or reasons for thinking that the supremacy of law is or is not the principle of political liberty it is even open to the adduction of examples—particular instances in history or fiction which show the dependence of political liberty upon the supremacy of law or the opposite

A topic in short must have greater amplitude than any other logical form of statement The familiar grammatical forms of the declarative or interrogative sentence or even the complex sentence which expresses a dilemma are therefore inappropriate for the statement of topics Since it must be able to include all these and more the statement of a topic must be less determinate in verbal structure

It is easier to say what a topic is not than what it is or should be If it must always be a less determinate expression than a sentence and if it must usually be a more complex expression than a single word or pair of words (which are the verbal expression of terms such as the great ideas) it would seem to follow that the proper expression of a topic is a phrase—often perhaps a fairly elaborate phrase involving a number of terms and signifying a number of possible relations between them This general description of the grammatical form of a topic does not however convey an adequate notion of the extraordinary variety of possible phrasings

An examination of the phraseology employed in the statement of the 3000 topics of the Syntopicon will reveal many types of topical statement Some topics are simple and others complex and of the complex topics some involve two and some more than two component phrases related as coordinate as primary and secondary or in some other way For example The ideal of the educated man (EDUCATION 1a) is a simple topic The right to property the ownership of the means of production (LABOR 7b) is a complex topic and The use and criticism of the intellectual tradition the sifting of truth from error the reaction against the authority of the past (PROGRESS 6c) is a more complex topic We shall return presently to the problem of the complex topic and especially to the consideration of the relation of its parts

For the moment let us examine the various ways in which topics—simple or complex—are phrased The following is a far from exhaustive sampling of the types of topical statement but among the 3000 topics of the Syntopicon there are many instances of each type

COURAGE 1 The nature of courage

DIALECTIC 1 Definitions of dialectic

CHANCE 1 The conception of chance

GOVERNMENT 1*e* The attributes of good government

MAN 1 Definitions of man conceptions of the properties and qualities of human nature

PLEASURE AND PAIN 2 The causes of pleasure and pain

ART 7*a* Art as a source of pleasure or delight

LABOR 3 The kinds of work and the relationship of different types of workers

MEDICINE 5*b* The classification of diseases

HAPPINESS 2*b*(2) Pleasure and happiness

CAUSES 3 Causality and freedom

COURAGE 7*c* Courage in war

HABIT 3*c* Instinct in relation to reason

ARISTOCRACY 2 The relation of artistocracy to other forms of government

CUSTOM 1 The distinction between nature and convention its application to the origin of the state and of language

CONSTITUTION 1 The difference between government by law and government by men the nature of constitutional government

FAMILY 2*b* Comparison of the domestic and political community in manner of government

JUSTICE 3 The duties of justice compared with the generosity of love and friendship

ART 11 Myths and theories concerning the origin of the arts

DEMOCRACY 5b The theory of representation

GOVERNMENT 1 The general theory of government

EVOLUTION 4 The problem of evolution the origin of plant and animal specie

CHANGE 13 The problem of the eternity of motion or change

ELEMENT 5b Arguments for and against the existence of atoms the issue concerning the infinite divisibility of matter

POETRY 9b The issue concerning the censorship of poetry

OPINION 5b Advantages and disadvantages of freedom of discussion

EDUCATION 8b The economic support of educational institutions

EXPERIENCE 6b The role of experience in politics the lessons of history

The foregoing examples illustrate various forms topics take according to the different kinds of subjects they propose for discussion Some deal with the nature of a thing or its definition some with its qualities or attributes some with its causes and some with its kinds some deal with distinctions or differences and some with comparisons or contrasts some propose a general theory for considera tion some present a problem and some state an issue Some—such as the last three above—are difficult to characterize by any formula The reason for all these types of topical statement—and others not illustrated in the examples given—cannot be explained without reference to the Outline of Topics as a whole

In the Outline of Topics for each chapter many different kinds of topics are necessary to cover the whole field of discussion represented by a great idea Thus for example a topic like COURAGE 1— The nature of courage —will occur in many chapters for many chapters open with a consideration of the nature of the thing signified by their principal term A topic like ARISTOCRACY 2— The rela tion of aristocracy to other forms of government —will appear frequently for the discussion of the principal term usually involves the consideration of its rela tion to other terms a topic like EMOTION 2 The classification and enumeration of the emotions or LABOR 3 The kinds of work and the relationship of differ ent types of workers will often occupy a place in an Outline of Topics because the classification or enumeration of kinds is a matter considered in many fields of inquiry or discussion The same can be said for the topics which state theories problems issues definitions attributes distinctions comparisons and so on

Under a great idea many different kinds of subjects are discussed and these are represented by the various topics set forth in the Outline of Topics for each of the great ideas It is not surprising that the discussion of one idea should re-

semble in many respects the discussion of another hence we should not be surprised to find a certain sort of topic in chapter after chapter Some kinds of topics will of course appear more frequently than others some chapters will have a much greater variety of topics than others

THE TOPICS NOT ONLY VARY IN TYPE according to their subject matter they also vary in scope or amplitude according to the broadness or narrowness of the theme they enunciate Some are open to every type of discussion whereas others seem to impose certain restrictions upon the type of discussion that would be relevant A topic like Arguments for and against the existence of atoms specifically calls for arguments In contrast a topic like The issue concerning the censorship of poetry permits in addition to arguments for or against censorship discussions of the issue itself dealing perhaps with its significance its presuppositions or implications and its relation to issues concerning the censorship of other forms of expression Even broader or more open in this respect are such topics as The differen e between government by law and government by men or Art as a source of pleasure or delight

In terms of what a topic purports to be every topic should have a certain minimum amplitude It should solicit and allow the expression of opposite opinions on whatever is the subject of discussion Whether the topic happens to be stated positively or negatively it should cover both negations and affirmations of the point in question It may have greater amplitude than this but this much at least it should have Since a topic is a meeting place for minds that disagree or differ it is defective if its wording suggests one point of view or one position on an issue where many are possible or where opposite arguments or views are known to exist

What has just been said applies to topics generally as statements having a certain logical character But because they are intended to function as the commonplaces of the great conversation the topics of the Syntopicon should have scope or range of another sort in addition to logical amplitude Ideally they should be so conceived and so phrased that each topic is able to solicit or to cover contributions from the whole range of authors and works included in *Great Books of the Western World* and from the books of the Bible as well This means that the ideal topic is one which is open to contributions from the poets and historians as well as the scientists philosophers and theologians which can cover every variety of doctrine or opinion that has been expressed in the tradition of the great books and which is equally receptive to the imagination and thought of ancient mediaeval and modern times

These are difficult requirements to meet They demand a comprehensiveness difficult to achieve without falling into a vagueness which would render the topic useless or unintelligible They demand in the formulation of the topic an almost perfect impartiality on the level of thought and neutrality on the level of language The more various and opposed the partisan views a topic tries to cover the more difficult it is for the topic to be conceived impartially that is without

prejudice to any of these views so that it seems to be formulated as if from *no* point of view The *more diverse and incompatible the terminologies in which* the opinions to be covered are expressed the more difficult it is for the topic to be worded neutrally that is without verbal coloration from one or another of the many vocabularies that have been used for the expression of relevant opinions

In view of such difficulties it could hardly be expected that the ideal would be realized in the formulation of every one of the 3000 topics in the Syntopicon Yet it is realized in many and approximated in a fairly large proportion of the rest Those which fall short of the ideal seem to be of two main types

(1) Some topics are so conceived and phrased that their coverage is restricted to analytical or argumentative discussions—discussions of the sort which are to be found in expository works of science philosophy and theology or in the discursive passages of poetry and history whether in the speeches of historical or fictional personages or in the comments of the poets or historians themselves *The conception and wording of the topic tends to exclude exemplary* or imaginative material of the sort to be found in the narrative passages of history or fiction or in other instances the topic tends to exclude material of purely illustrative significance such as reports of experiments in scientific books These topics fall short of the comprehensiveness of the ideal topic by virtue of the type of material they reject

(2) Some topics are so conceived and phrased that their coverage is restricted to the doctrines theories or opinions of one part period or phase of the whole tradition The limitation on the range of materials which are admissible under such topics may be more or less stringent Least restricted are those topics which fail to comprehend both pagan and Christian literature because they are so conceived and worded that they apply to one or the other but not both of these two major phases of the western tradition More restricted are those topics so conceived *and worded as to apply only to a certain group of authors sharing a com* mon doctrine or vocabulary Most restricted are the topics which cover the thought of a single author The last represents the extreme opposite of the ideal topics which cover the thought and imagination of every period and every variety of doctrine or opinion no matter how they may be verbally expressed But all three of these defective topics fall short of the ideal by virtue of their acknowledged failure to be impartial in thought or neutral in phrasing

THE SECOND OF THE TWO MAIN TYPES OF DEFECTIVE TOPICS fails to perform the logical function of a topic and also fails to do what the topics were *normally* intended to do in the construction of the Syntopicon Logically a topic should be hospitable to differences of opinion or opposite views on the same subject If for example there are two or more contrary views on a given subject it should be possible to formulate a topic which indicates the subject of the controversy in a manner that is impartial to all sides But this was not always possible because of difficulties inherent in the materials to be covered It sometimes became necessary in constructing topics appropriate to the content of the great books to state con

trary views in a *set of topics* each worded to fit the particular view it represents This *set of topics* then performed the logical function which ideally a single topic should perform and from the point of view of the Syntopicon the set of topics provided the remedy in all those instances in which logically defective single topics seemed to be unavoidable It had the requisite comprehensiveness for a syntopical reading of the great books

Before we examine the remedy it may be useful to examine the reason it was necessary The authors of the great books tend to have special vocabularies This has little to do with the diversity of the languages in which they originally wrote it is rather the result of the diverse *terminologies* they use to express their thought This is as apparent in English translations of their works as it is in their original languages

The more inventive and fecund a great mind is the more it will shape the language it uses to fit its thought To express a new idea or insight a new word is invented or an old word given a novel meaning Sometimes in the development of his own characteristic vocabulary a great writer uses a new word for an old idea which he has appropriated and assimilated to his own thought Sometimes the opposite occurs the traditional word is appropriated or borrowed but the idea which it long expressed is replaced either by a totally new or at least by a variant conception

It can be said without exaggeration that no two authors of the great books have identical vocabularies This does not mean that they share no common terms—identical words with identical meanings On the contrary even those who seem to be most divided by the differences in their terminologies give evidence of belonging to the same tradition by their common acceptance of a large number of terms Yet from the extreme at which they share a minimum number of important terms to the extreme at which their basic vocabularies are much more alike than different this much can be said of *any two authors of the great books* first that they use some words in the same way and some differently and second that when they use words differently they are either expressing the same thought in different words or are using the same word to express wholly or partially different notions

These facts do not make it impossible for the tradition of the great books to have the qualities of a good conversation But the necessity of shifting from the vocabulary of one to the vocabulary of another makes it difficult often extremely difficult to discover and point out when the authors are talking about the same idea and in what way their remarks are relevant to the same theme These are the semantic difficulties which the Syntopicon had to overcome in order to reveal and record the existence of the great conversation

For the most part differences in terminology do not make it impossible for topics to cover all authors who make some contribution to the discussion of a particular theme Even though they do not all use the same word to express their thought or do not attach the same meanings to the words they use in com

mon it is usually possible to find a neutral phrasing for the topic If the relevant authors use the same words with different—but *related*—meanings the language of the topic will have the systematic ambiguity necessary to cover these variations If the relevant authors do not all use the same words to express their thought but use words which are closely related in meaning then it may still be possible to find a neutral phrasing for the topic

This may be achieved by formulating the topic in the words of ordinary discourse words which are not specially characteristic of any of the authors Another method is to phrase the topic in the words used by one author or group of authors This can be done without prejudice to the thought of the others when the key words in the distinct vocabularies of the several authors are related as synonyms It may even be possible to use synonyms in the phrasing of the topic to represent the vocabularies of different authors By any of these methods the wording of the topic can be given sufficient systematic ambiguity to carry all the related meanings

Sometimes however the meanings which different authors attach to the same word are *not closely related* sometimes an author has coined words to express his meaning or given *certain words or phrases the stamp of his own doctrine* sometimes the words used by an author have overtones or systematic implications which make it impossible to find synonyms for them in the language of other authors or in the vocabulary of ordinary speech In all these cases a single topic to cover all the authors concerned would require phrasing so vague or so general that it could not contribute anything to the analysis of the idea under which it occurred Such semantic difficulties were usually solved by the construction of a *set of topics* each phrased in the language characteristic of particular authors or groups of authors The unity of the set was indicated by a topic which served as the heading under which the particular topics were assembled For the purpose of stating this unity a vague or general phrasing of the heading was satisfactory since the content of the discussion could be sufficiently indicated by the more explicit phrasing of the subordinate topics

For example in the Outline of Topics for the idea of DIALECTIC four topics state four distinct theories of the nature of dialectic The heading for the group of topics— 2 Diverse theories of dialectic —merely indicates that the subordinate topics state the different conceptions to be found in the tradition of the great books The four topics are phrased in a manner appropriate respectively to the thought of Plato Aristotle Kant and Hegel and Marx

2*a* Dialectic as the pursuit of truth and the contemplation of being

2*b* Dialectic as the method of inquiry argument and criticism in the sphere of opinion

2*c* Dialectic as the logic of semblance and as the critique of the illusory employment of reason beyond experience

2*d* Dialectic as the evolution of spirit or matter

The use of the words or matter in topic 2d shows how a single topic can be so phrased as to cover the thought of authors whose positions have a certain affinity even though they disagree as much as do Hegel and Marx For both Hegel and Marx dialectic is an evolution Phrasing the rest of the topic in the alternative (viz of spirit or matter) enables it to associate under one heading the Hegelian conception of the dialectic of spirit and the dialectical materialism of Marx

Another example can be found in the chapter on IDEA Here the six topics which appear under the general heading— 1 Doctrines of idea —represent phrasings appropriate to groups of authors or to single authors The six topics are

1a Ideas or relations between ideas as objects of thought or knowledge the ideas as eternal forms

1b Ideas or conceptions as that by which the mind thinks or knows

1c Ideas as the data of sense experience or their residues

1d Ideas as the pure concepts of reason regulative principles

1e Ideas in the order of supra human intelligence or spirit the eternal exemplars and archetypes the modes of the divine mind

1f Idea as the unity of determinate existence and concept the Absolute Idea

Again it can be pointed out that the wording of topics 1a and 1e permits the association of authors whose doctrines are affiliated even though they do not agree—Plato with Locke in the case of topic 1a Spinoza with Aquinas and Augustine in the case of 1e

Sometimes however a topic that is restricted to the doctrine of one author may have to be introduced into a set of topics all the rest of which have general or unrestricted range This happens most frequently when a particular author makes a contribution to the conversation which no one else anticipates or echoes Thus in the chapter on MEMORY AND IMAGINATION under the heading of a general topic a specially phrased subordinate topic had to be introduced for the contribution of Freud The general topic was 8 The nature and causes of dreaming the subordinate was 8d(1) The manifest and latent content of dreams the dream work

In the chapter on LABOR under the general heading 7 Economic and political justice to the laborer a subordinate topic specially phrased had to be introduced for the contribution of Marx 7c(3) The proletariat as a revolutionary class its revolutionary aims

In the chapter on BEING under the general heading 7b The distinction between substance and attribute accident or modification independent and dependent being a specially phrased subordinate topic had to be introduced for the contribution of Descartes and Spinoza 7b(4) Extension and thought as dependent substances or as attributes of infinite substance

These restricted or doctrinal topics are *exceptions* to the rule Most topics have a neutral phrasing and a systematic ambiguity which permit them to comprehend the whole tradition and all differences in doctrine or opinion The great majority are topics like The happiness of the individual in relation to the happiness or good of other men (HAPPINESS 5a) or Chance necessity and design or purpose in the origin and structure of the world (CHANCE 3) or The political regulation and censorship of education (EDUCATION 8c) Topics of this sort contain no words prejudicial to the thought of any author and impartially cover every variety of relevant opinion in the whole tradition of western thought no matter how violently the opinions may differ

In short the topical ideals of comprehensiveness and impartiality were achieved in the Syntopicon either by single topics or by sets of topics which comprehended the dialectical development of a concept or an issue in western thought The rule followed was to employ single topics wherever they could be constructed and to construct a set of doctrinal topics or to introduce a doctrinal topic into the context of others *only when the semantic difficulties could not be otherwise surmounted.*

TO FOLLOW THE RULE OF USING SINGLE TOPICS wherever they could be con structed and to approach the ideal of making them as comprehensive as possible it was sometimes both necessary and desirable to formulate a complex rather than a simple topic

Examples of these two kinds of topics have already been given The most obvious distinction between them can be most precisely stated in grammatical terms The simple topic is undivided its elements are words all of which belong to the same phrase The complex topic is divided its divisions are indicated by two kinds of punctuation A colon divides the complex topic into its two main parts The first of these two parts is usually undivided but the second may be divided into two or more subordinate parts by semi colons The two main parts of a complex topic are always separate phrases when the second of these is di vided its parts are usually separate phrases

From this grammatical description of the complex topic it might be inferred that considered logically it is always a union of two or more simple topics each expressed by separate phrases But this is not always the case Complex topics seem to fall into three principal types and their differences must be examined in order for their several distinct functions to be understood

(1) Sometimes the phrase following the colon does not represent a separate topic but merely makes the meaning of the phrase preceding the colon clearer in some way—by expanding it by specifying it even by illustrating it The colon separating the first phrase from the one or more phrases which follow is roughly equivalent in meaning to the words that is to say or such as The first type of complex topic is therefore only grammatically not logically complex and cannot be broken up into two or more separate topics

The following examples illustrate the first type of complex topic

HISTORY 4b The laws and patterns of historical change cycles progress evolution

CITIZEN 8 The idea of world citizenship the political brotherhood of man

EDUCATION 2 The kinds of education physical moral liberal professional religious

CONSTITUTION 7b The safeguards of constitutional government bills of rights separation of powers impeachment

JUSTICE 2 The precepts of justice doing good harming no one rendering to each his own treating equals equally

EXPERIENCE 7 Mystical or religious experience experience of the supernatural

EVOLUTION 4c The origin of new forms of life special creation spontaneous generation or descent with modification from older forms

SIGN [illegible]a The first and second imposition of words names signifying things and names signifying names

(2) In the second type the separate phrases of a complex topic represent the phrasing of the same topic or related topics in a manner appropriate to different authors In some cases the difference between the first and second phrasing is largely verbal it is almost as if the *same* topic were being phrased in parallel ways In other cases the difference is doctrinal as well as verbal Here the phrase which precedes and the phrase which follows the colon express more or less distinct topics which are like two closely related doctrinal topics Clearly it is only in the second case that the complex topic could have been broken into two separate topics

The following examples illustrate the second type of complex topic (In these illustrations the authority for the doctrine is indicated in parentheses)

JUDGMENT 8b Analytic and synthetic judgments (*Kant*) trifling and instructive propositions (*Locke*)

SOUL 2b The order connection and interdependence of the parts of the soul (*Plato Aristotle Aquinas*) the id ego and super ego in the structure of the psyche (*Freud*)

SENSE 3d(3) The estimative or cogitative power (*Aquinas*) instinctive recognition of the harmful and beneficial (*Darwin Freud*)

QUALITY 2b Primary and secondary qualities (*Locke*) the related distinction of proper and common sensibles (*Aristotle*)

Of the foregoing examples JUDGMENT 8b illustrates a grammatically complex topic which is logically simple the two doctrinal phrasings are parallel phrasings

of the same topic On the other hand SOUL 2b illustrates a logically complex topic the two parts of which are distinct topics and represent related doctrines in the theory of soul

In some instances the topic which precedes the colon is generally phrased while that which follows is the same topic phrased in the language of a particular doctrine For example

FAMILY *7d* The emotional impact of family life upon the child the *domestic triangle the symbolic roles of father and mother (Freud)*

In some instances what follows the colon is itself divided into subordinate parts by a *semi colon These subordinate parts may be related as two parallel doctrinal* topics For example

SENSE 3*c*(4) The distinction between sensation and perception (*James*) the accidental sensible (*Aristotle*) complex ideas of substance (*Locke*)

(3) In the third type the separate phrases of a complex topic represent distinct but related topics Here the related topics are all phrased in the language of common speech *They do not express the doctrines of particular authors or* groups of authors These topics are all logically as well as grammatically complex in every case they could have been broken up into separate topics though in many instances giving them independent status would have necessitated a more explicit or elaborate phrasing of each The union of these potentially independent topics into a single complex topic is justified by the logical relation between the parts They are related aspects of a problem or issue or they are related *points in the discussion of a theme which is itself complex Sometimes the parts* are logically coordinate in which case the topic preceding and the topic following the colon have equal weight neither restricts the meaning of the other Sometimes the parts are not coordinate the one or more topics following the colon *are logically subordinate to the one preceding it in which case the primary topic* controls and limits the meaning of the subordinate parts

The following examples illustrate the third type of complex topic with *coordinate* parts

EVOLUTION *5b* Competition in mating sexual selection

INFINITY *4b* The infinite divisibility of matter the issue concerning atoms

SCIENCE *6b* *The place of science* in society the social conditions favorable to the advancement of science

JUSTICE *9f* Justice between states the problem of right and might in the making of war and peace

The following examples illustrate the third type of complex topic which has a first or *primary* topic followed by one or more *subordinate* topics

STATE 2c The source or principle of the state s sovereignty the sovereignty of the prince the sovereignty of the people

SPACE 2c Space as a medium of physical action the ether and action at a distance the phenomena of gravitation radiation and electricity

PHYSICS 4b Experimental discovery inductive generalization from experiment the role of theory or hypothesis in experimentation

MEDICINE 1 The profession of medicine its aims and obligations the relation of physician to patient the place of the physician in society

IN A WHOLE OUTLINE OF TOPICS distinct topics are logically related in two ways they are either coordinate or one is subordinate and the other is its supraordinate This is clearly parallel to the two sorts of relation between the principal parts in a complex topic of the third type It is reasonable therefore to ask why certain topics which are logically coordinate or logically supraordinate and subordinate should be related in these ways as separate topics whereas other topics which have the same logical relationships to one another should be related as the parts of a single complex topic

In differentiating between topics to be given independent status and topics to be united into a single complex topic two principles were followed The first was the principle of comprehensiveness A number of related topics were united into a single complex one when their union seemed to be required for a comprehensive discussion of the matter under consideration The discussion each would have covered if it had been left as an independent topic would have been fragmentary or partial The decision to unite topics was never made in the abstract but always in terms of the content of the great books that is in terms of how their various contributions to the discussion could be most perspicuously organized In short related topics were united to form a complex topic when the coverage of the complex topic more nearly approximated the syntopical ideal than the simple topics would have had each been treated as independent

The second principle involved the ideals of simplicity and unity and thus acted as a check to the first principle If two simple topics were sufficiently comprehensive in their coverage then even though logically related they were given independent status on the ground that simple topics have greater unity than can be achieved by the union of separate topics no matter how closely related The greater the unity of a topic the greater can be the mutual relevance of the contributions to the discussion it covers

This second principle worked automatically when two logically related topics were themselves complex Complex topics were always made independent But when the problem was whether certain simple topics should remain independent or be united the two principles of comprehensiveness and simplicity had to be applied with discretion sometimes in favor of comprehensiveness and sometimes in favor of unity It is impossible to state all the reasons of convenience or

policy which operated in such decisions or to report how particular judgments were made That such decisions could not always be made with certainty or by rule of thumb is indicated by the fact that during the construction of the Syntopicon many topics which were independent at one stage of the work were later merged and complex topics were frequently broken into a number of simple ones

The final product of all these working judgments is manifest in the structure of the Outline of Topics for each of the great ideas The numbering of the topics in each Outline indicates which topics are related as coordinate and which are related as supraordinate and subordinate[2] But it is not always possible to tell from its grammatical form whether a given topic is simple or complex since as we have seen some grammatically complex topics are logically simple Nor is it always possible to tell at once whether a logically complex topic is of the second or third type or if of the third type, whether its parts are coordinate or supra ordinate and subordinate Sometimes this will be obvious from the wording or construction of the topic but often it will be discoverable only after the discussion it covers has been read and studied

A NUMBER OF OTHER POINTS concerning the structure of the Outlines of Topics call for brief comment

(1) *The relation of supraordinate and subordinate topics* The subordinate topics usually represent an analytical development of the theme or problem stated in the supraordinate topic under which they appear They indicate particular points in the general area of discussion defined by the supraordinate topic As it covers the whole they cover the related parts of the whole Sometimes how ever the subordinate topics represent a set of doctrinal alternatives rather than an analytical development of connected points under the supraordinate Exam ples of this have already been given (see pp 1241-1242)

In the first case the supraordinate may function as a topic in its own right in addition to serving as a general heading for subordinates When it functions as a topic it usually covers a discussion of the whole or general theme whereas the subordinate topics cover discussions of the parts or particular points In rare instances the supraordinate topic introduces a special point of its own in addi tion to stating the general theme which the subordinates particularize But in the second case that is when the *subordinate topics state a set of doctrinal alternatives* the supraordinate serves merely as a general heading[3]

[2]T pics n mbe d r 3 t p im ry a d oo din t with o e n th A y of these m y be supra din t in whi h se t p will h d t bo d t t p cs numbe ed b c, c. d these ubord nates will b oo d t w th o noth A y of thes subo d t t p cs m y tu be p din te w th respe t to its own set of bord tes in whi h case t p e w ll h e u d r t s bo d t t pics mbe d ( ) ( ) tc Primary d se d ry t p cs may may t ha bo d nates b t t pics f b d r ( ) ( ) tc. ha bo d tes

The bo summary f th r lat f s pra rd na nd bo d nat t pics pplies to the relatio be twee p im ry and se d ry t p cs (g betw t p c 3 and t p cs 3 3b 3c,) and lso t the lat between sec dary d te iary t p cs (g betwee top 3b nd t p cs 3b( ) 3b( ) c.)

(2) *The analytical order of the Outline of Topics as a whole* The primary topics (*i e* topics 1 2 3 etc) are coordinate in rank but among these coordinates certain kinds of topics normally tend to precede others in the Outline The discussion usually opens with a consideration of the meaning of the idea or of the various ways in which the idea is defined or conceived Almost as frequently the opening topic deals with the nature of the thing signified by the idea or proposes the most general theory or theories in which the idea is involved

The immediately following topics are usually concerned with the principal divisions or classifications of the idea or the thing it signifies (*i e* its kinds types or modes) or with its causes or conditions and with its relation to other ideas or things frequently stated in terms of comparisons or contrasts In some instances this second group of topics deals with the main problems or issues raised by the idea in some instances topics of this sort follow the consideration of kinds causes and relations

The concluding topics usually deal with the significance of the idea in fields of learning and inquiry other than the field in which the idea is a *principal* term or concept or they may deal with the problems or issues raised by the idea in these other fields In any case concluding topics of this character cover phases of the discussion which are plainly subsidiary to the matters dealt with in the opening and middle topics

In chapters on ideas which are susceptible to such discussion the final topic may be concerned with historical considerations or may provide a place for the collection of illustrative materials

(3) *Variations in the structure of the Outlines of Topics* The statements made in (2) above are intended to describe the normal or typical order of the primary topics But of the 102 Outlines of Topics no two are exactly alike in structure or order of development Not all for example open or close with topics of the sort indicated nor do all contain the same variety of intermediate topics or dispose them in the same order

The Outlines vary in a number of other respects They differ strikingly in length or number of topics ranging from the chapter on FATE with only 6 topics to the chapter on MIND with 76 topics They differ almost as much in their analytical detail or the complexity of their structure some chapters have only primary topics or very few subordinates whereas in other chapters almost every primary topic covers a set of subordinates and many of these in turn have subordinate topics of their own The chapters on FATE or COURAGE for example have extremely simple Outlines those on MIND or STATE extremely complex ones

The Outlines also differ in regard to the presence or absence of sets of specialized doctrinal topics Chapters like PUNISHMENT and EDUCATION in which the principal term has a common core of meaning throughout the great books are not embarrassed by semantic difficulties and so do not need to resort to doctrinal topics stated in the language of different authors whereas chapters like IDEA and

MIND beset by semantic difficulties require topics which specify the various senses in which the principal term is used by different authors or groups of authors

Not only in this last respect but also with regard to their differences in complexity length and the order of their topics the Outlines vary with the character of the great ideas they articulate and analyze As each idea is different from all the rest so is each Outline of Topics Each was constructed and written to fit the idea—not the idea by itself but as it has been treated and discussed in the great books.

THE POINT JUST MADE EXPLAINS WHY *these 2987 topics were selected—no more* no fewer and no others—and why they were ordered as they appear in the Outlines It is like the explanation why just these 102 terms were chosen as the great ideas Yet *if the explanation is understood to mean that the Outlines of Topics* were entirely fitted to the great books it is only partly understood This would ignore another factor which shaped the Outlines and ordered the topics even if it did not greatly affect the selection of the individual topics and their phrasing That other factor was the consideration of purely logical criteria in constructing the Outlines To the extent that such logical considerations prevailed the content of the great books was also fitted into the Outlines of Topics

Logical considerations did not always prevail The Outlines of Topics assume the form of analyses but as analyses many of them have logical flaws or deficiencies Certain topics call attention to the absence of others which would be included in a logically rounded analysis of the idea Certain topics seem to be given greater prominence than they would deserve *in a logically balanced analysis and* certain topics are treated with greater analytical refinement than others which *logically deserve the same treatment In addition* the actual order of topics often only approximates the ideal analytical order and sometimes even definitely departs from it

These defects both logical and substantive in the Outlines of Topics are all consequences of the same fundamental fact The Outlines do not represent analyses of the great ideas considered abstractly or in themselves It might almost be said that they are not analyses of the ideas at all but rather of the *discussion* of the ideas in the great books That statement however would be too extreme Though the selection of certain topics and the omission of others were wholly determined by the content of the great books the *order of the topics selected the choice of* the primary topics and the weight or importance given to certain topics were determined partly by the content of the great books and partly by standards of logical precision in the construction of a rounded and balanced analysis

The *Outlines of Topics* therefore represent an attempt to reconcile the demands of logic with fidelity to the syntopical aim of exhibiting the great conversation in all its strength and weakness The actual process by which the Outlines of Topics were progressively formed over a period of seven years reflects the tension between these two interests even as the final product reflects their joint influence

The first drafts of the Outlines of Topics were largely *a priori They were logical*

analyses of the ideas formulated prior to any effort to use the topics as headin s for collecting references to the great books Yet even these first drafts were not entirely *a priori* they were constructed in the light of considerable knowledge of the tradition of western thought To this extent they were *a posteriori* that is empirical or historical rather than purely logical

These original drafts were repeatedly revised in the effort to use each topic as a heading for a segment of the discussion Topics were discarded new topics were added certain topics were merged and others were subdivided a very large proportion of the topics were rephrased again and again and the Outlines as wholes were reshaped whenever substantive alterations in their component parts necessitated logical reorganization or refinement In this process almost all the Outlines went through many drafts At the same time each Outline was scru tinized as a whole for its intelligibility as an articulation and its rationality as an organization of the whole discussion of a great idea

The absence of certain concepts of contemporary importance from the list of the great ideas can be interpreted to mean that those concepts have only recently risen to a prominence they do not have in the tradition as a whole The absence of certain topics from the Outlines can be similarly interpreted The omitted topics cover discussions of recent origin or discussions which though they may have antecedents in an earlier day do not receive as much attention in the great books as they currently attract In marking the points on which the great books are silent these absent topics point to contributions to the great conversation made in our time as well as to *lacunae* in our intellectual heritage

On the other hand the Outlines contain a number of topics which elicit from the great books contributions that are slight in number and variety In certain instances the presence of these topics reflects the effort to make the Outlines as analytically rounded and balanced as the content of the books would permit But in other cases the retention of topics in spite of the slightness of the discussion they cover serves to record the antecedents in the tradition of themes or problems which have become dominant only in our own day

One final point about the Outlines remains to be made They often con tain topics which resemble one another in the matters they propose for discussion This is seldom if ever true of the primary topics The overlapping occurs mainly among the subordinates and in the interest of analytical refinement or balance In the analytical breakdown of two primary topics similar points are often logically relevant In consequence similar topics will appear in the two sets of subordinates If in order to avoid the duplication one of these subordinate topics had been omitted one of the supraordinates would have been left incompletely analyzed and articulated

For example in the chapter on Law under the general heading of topic 4— The natural law —one of the subordinates is topic 4f The relation of natural law to civil or municipal law the state of nature and the regulations of the civil state In the same chapter under the general heading of topic 7— Law and the

state —one of the subordinates is topic 7c The priority of natural to civil law the inviolability or inalienability of natural rights The two topics are by no means identical yet they do have much in common Each propo es a theme that is logically appropriate in the analysis of the general heading under which it falls The decision to include both represents the judgment that the inclusion of partially overlapping topics is a much less serious fault than the logical defect which would result from the exclusion of one of them in order to avoid duplication

The policy which permitted overlapping topics in the same chapter for reasons of analytical completeness had even greater justification in the case of different chapters The great ideas are so related that it would be impossible to construct analytically adequate Outlines of Topics without some topics under one idea resembling some topics under other ideas In the same chapter the resemblance between topics is never more than a similarity—a partial overlapping But between chapters the overlapping may be almost complete The topics may be identical except for a slight difference in phrasing For example the chapter on LAW necessarily includes topic 7b— The supremacy of law as the principle of political freedom —under the general heading of topic 7 Law and the state But there is an equal necessity for including in the chapter on LIBERTY topic 1d — The supremacy of law as a condition of political liberty —under the general heading of topic 1 Natural freedom and political liberty

Such identical topics are the exception rather than the rule For the most part the resemblance between topics of different chapters goes no further than similarity But there is as much reason in the *interest of analytical completeness* for the partially overlapping topics as for the identical ones The chapter on CITIZEN necessarily contains a discussion of The qualifications for citizenship extent of suffrage (CITIZEN 3) this i partially duplicated by a discussion that is unavoidable in the chapter on CONSTITUTION— The justice of different constitutions the extent and character of citizenship under each (CONSTITUTION 5a) Or to take another example the discussion of philosophy necessarily includes the consideration of The relation of philosophy to mathematics (PHILOSOPHY 1b) which approaches that problem somewhat differently from the inevitable consideration of a similar theme in the discussion of mathematics— The service of mathematics to dialectic and philosophy its place in liberal education (MATHEMATICS 1b)

Between any one of the 102 chapters and all the others the number of overlapping topics—either identical or similar in scope—may at first appear large but it will seem less remarkable as one realizes the interdependence of the great ideas Far from concealing the overlapping of topics as if it were a blemish the Syntopicon calls attention to it precisely because it points out the interconnection of the great ideas This is one of the functions performed by the Cross References in each chapter As the Inventory of Terms shows the interrelation of the great ideas by noting the appearance of the same term in topics of various chapters so the Cross References show the interrelation of the great ideas by

noting for the topics of one chapter the topics in other chapters with which they have some affinity

THE CROSS REFERENCES POINT OUT TWO DIFFERENT KINDS of affinity between the topics of one chapter and the topics in others One sort the affinity of similar topics has already been discussed The other sort of affinity exists between a topic in one chapter and topics in other chapters that deal with related not similar matters The latter provide contextual discussion of matters bordering on the theme proposed by the first

For example the chapter on FAMILY contains a discussion of Eugenics control of breeding birth control (FAMILY 6b) the chapter on EVOLUTION goes more fully into the problems of genetics and heredity and contains two sets of topics which provide a general context for the consideration of eugenics in the chapter on FAMILY They are the topics in EVOLUTION headed by 2 Genetic variation in the course of generations and 3 The process of heredity The Cross References in the chapter on FAMILY therefore call attention to the topics in EVOLUTION in the following manner

> *For* A more general consideration of the problems of heredity *see* EVOLUTION 2–3e

The Cross References also perform one other service Sometimes a topic or group of topics is omitted from a particular chapter because while it has relevance to the idea of that chapter it is not indispensable to a rounded or balanced analysis of that idea However this topic or group of topics may be necessarily involved in the analysis of some other idea The Cross References call attention to such supplementary topics

For example the chapter on POETRY might have considered the nature of the fine arts of which poetry is one But the Outline of Topics for POETRY opens with a consideration of The nature of poetry its distinction from other arts To supplement this with a discussion of the general theory of the fine arts presupposed by the distinction of poetry from other arts the Cross References contain the following entry

> *For* The consideration of the fine arts in general *see* ART 7a

Often there is only a shadowy difference between the cross references to such supplementary topics and the cross references to related or contextual topics It rests largely on a sense of the fitness of a particular topic for the Outline of Topics of a particular chapter If the topics cited by the Cross References might have been included in this chapter but were not necessary they can be regarded as supplementary if on the other hand they would have been adventitious or at best peripheral in this chapter they can be regarded as contextual In contrast there is a sharp difference between both these types of cross references and the third type which cites similar or identical topics in this and other chapters—topics which are necessary to all the chapters concerned

The three types of cross references can sometimes be recognized by certain characteristic words in their phrasing The cross references to similar or identical topics often begin with such words as *For* Other discussions of or *For* Another consideration of or *For* Other aspects of The cross references to contextual or related topics usually begin with such word as *For* Matters relevant to or *For* Discussions bearing on or *For* Discussions related to Still another phrasing for the contextual cro s references is *For* The general theory of or *For* The general discussion of [4]

The order of the Cross References follows roughly the order of topics in the Outline The wording of the Cross References generally indicates the topic or group of topics in the Outline for which the particular cross reference to topics in other chapters is being made For example LABOR 1a reads The curse of labor myths of a golden age and the decay of the world The first cross reference in LABOR reads *For* Other discussions of the golden age *see* MAN 9a PROGRESS 1c TIME 8b LABOR 1c reads The pain of labor and the expiation of sin the disciplinary and penal u e of labor The second cross reference in L BOR reads *For* Other considerations of penal labor *see* PUNISHMENT 4b(3) LABOR 1e reads The honor of work and the virtue of productivity progress through the invention of arts for the conquest of nature The third cross reference in LABOR read *For* Matters relevant to the nature of productive work and the factors influencing productivity *see* ART 4 9a–9b EDUCATIO 16 SCIENCE 1b(1)–1b(2) WEALTH 3a

Since the relation between particular topics and particular cross references is immediately obvious from the parallelism in their wording the absence of cross references for some of the topics is also immediately discernible For example LABOR 1d– The social necessity of labor and the moral obligation to work — does not have a cross reference to topics in other chapters No other chapter contains topics *similar enough* or *closely enough related* to this theme to warrant their being cited

This is usually the explanation of the lack of cross references for certain topics But sometimes the omission of cross references for particular topics may have been simply an oversight which is natural enough in view of the magnitude of the comparison involved—each topic with 3000 others And sometimes the omission may represent a debatable judgment concerning the relevance of topics in other chapters to a particular topic in this one or concerning the similarity between a topic in this chapter and those in other chapters Whether other topics are *similar enough* or *closely enough related* may frequently be a difficult and reversible decision

As already pointed out both the Cross References and the Inventory of Terms

[4] Th cross-ref rence to suppl m t ry t p a su lly gn fi d by th sam ope ing w rds as those to th context l top c d g a ma y os fe ce wh ch are t ma k d by y d t nct phrasing may belong to ny n f th hree types. The d may n t lways be otif d d ce wh t to pe t the p f he hapters cit d by th C oss R f re es b t wh r th phrasi fail t g c h m l nf m on h l ly disc f r hurself the type f relatio in ol ed n the oss-ref re ces by tu ning t the top cs ci ed

serve to trace the intricate network of relationships among the 102 great ideas Each does this in its own way It should be added that both the Cross References and the Inventory of Terms also serve as instruments for finding particular topics among the 3000 topics in the 102 chapters The Cross References do this by listing the topics of other chapters according to their relevance or similarity to those of a particular chapter Hence the reader while using or studying a particular chapter is informed of the location of germane topics in other chapters The Inventory of Terms lists the fundamentally significant words in each of the topics and in addition the terms which are implied by its meaning Each term is followed by a list of chapters in which related or similar topics appear

III THE INTRODUCTIONS

In the structure of each chapter the Outline of Topics follows the Introduction This essay might have been expected therefore to deal with the Introductions before it discussed the Outlines of Topics

There are two reasons for reversing the expected order First the topics are in a sense integral parts of the great ideas and therefore the examination of the Outlines as analyses of the ideas naturally follows the consideration of the ideas themselves Second the topics state the themes problems and issues with which the Introductions deal The Introduction to each of the great ideas is in part at least a commentary on its topics It is not out of order therefore to examine the commentary after considering the topics commented on

But if this is the proper order then it would seem that it might have been better in constructing the Syntopicon to have placed the Outline of Topics first in each chapter with the Introduction following rather than preceding it But the fact is that the Introductions are *only in part* a commentary on the topics They also deal with the idea as a whole in such a way as to be preparatory for reading the topics They are genuinely introductions *to* the topics as well as commentaries *on* them

The reciprocal illumination of each by the other will be better understood in terms of the purposes the Introductions are intended to serve It will then become clear that the advantage of reading the Outlines of Topics before the Introductions is almost equal to the advantage of reading the Introductions first

Like the Outlines of Topics the Introductions vary from chapter to chapter—not so much in length as in their method of exposition They do not all begin or end in the same way nor do they uniformly treat the same matters or proceed in the same order

The way in which each Introduction deals with a great idea corresponds to the characteristic difference of that idea from all the others The ideas differ in four respects and the Introductions differ accordingly Each idea has a unique structure It also has a unique history The character and intensity of its verbal difficulties are often peculiar to itself The problems and issues it has engendered are different in origin and in the possibilities of their resolution

Nevertheless all the Introductions were conceived and written to perform a common task They were intended to serve the same fourfold purpose corresponding to the four respects in which the ideas differ The Introductions attempt to treat each idea *semantically historically analytically* and *dialectically*

(1) *The semantic aim* It has already been pointed out that most of the names of the great ideas have a range of meanings They have been used by the authors of the great books in different senses and many of them have in addition meanings of recent origin or popularity This is true not only of the principal term in each chapter but also of some of the subordinate terms which appear in the topics Often the meaning of the principal term is affected by the meaning of a subordinate term connected with it in the statement of a topic

The semantic aim of the Introductions is to record the various meanings of the words which have been used to name the great ideas and of the other words which have been used traditionally and currently in discussing the great ideas The Introductions seldom try to do this exhaustively They aim at verbal clarification only where necessary—in order to prevent real agreements from being obscured by differences in language or to discover real disagreements in thought between men who so far as their language goes appear to be saying the same or at least compatible things

Like the other parts of the Syntopicon the Introductions have as their ultimate aim the re-enactment of the great conversation Each Introduction tries to re-create the discussion of a great idea as though the authors contributing to that discussion were engaged in conversation about its major topics—and almost as though they were contemporaries confronting each other in actual discourse rather than dispersed across thirty centuries The semantic aim of the Introductions is to clarify the meanings of the words they use so that they can be heard talking relevantly to one another The Introductions succeed to the extent that they suggest how the great minds of the western tradition exist together in a single universe of discourse

( ) *The historical aim* To collapse thirty centuries of imagination and thought into a single historical moment would seem to be unhistorical or worse antihistorical Yet the Introductions have just been described as doing exactly this since they treat the authors of the great books as if they were contemporaries and use the present tense in reporting their discussion of ideas

Mill and Aristotle for example may be reported as taking one side of an issue on which they are opposed by Plato and Hobbes Lucretius may be said to be more in agreement with Freud on certain matters than he is with anyone in antiquity As far as possible the authors are associated with one another in terms of their thought not their times They are opposed to one another in the same way The centuries can be as *readily* bridged by genuine agreements as they can be divided by disagreements apparent or genuine Neither the agreement nor the disagreement is a necessary function of simultaneity or succession in time

Yet sometimes a certain point of view is characteristic of a period or phase of western civilization Sometimes the political economic and cultural conditions of a time are more than the background of thinking or the environment to which the thought refers they are conditions of the thought itself and therefore of its intelligibility It is unquestionable that some men originate ideas which others borrow and often change There is little doubt that the thought of one whole period influences the thought of a later period either to react against it or to alter it for assimilation Certainly then the succession of the centuries the location of minds in time the relation of thought and imagery to the culture of a period the influence of one mind upon another and one period upon another—certainly all these things are significant features of the great conversation as it develops in time The very word tradition connotes a passing from age to age—both a heritage and an inheritance To consider the tradition of western thought is therefore to deal with the history of ideas

Both sides of the picture contain a portion of the truth—the temporal and the non temporal the historical and the unhistorical Thought transcends time to a certain extent and to a certain extent time conditions thought Ideas have a career in time and therefore a history but they also have an inner logic which transcends history To some extent therefore all minds dealing with the same ideas are contemporary they are together in the same logical if not historical moment by virtue of their agreements and disagreements To deny this is to commit the error of historicism But in some measure minds dealing with the same ideas cannot deal with them in the same way at different historical moments To neglect or ignore this fact is to commit an opposite error which might be labelled transcendentalism

The Introductions try to avoid the fallacies of both extremes by combining the historical with the logical treatment of ideas But they do not try to do equal justice to both aspects of the matter and in consequence do not preserve a perfect balance between the two approaches The primary aim of the Introductions is not historical as it is not semantic It is dialectical The Introductions do not carry verbal clarification further than is necessary to prevent language from obscuring the logical realities—the issues the agreements the disagreements and the arguments For the same reason the Introductions do not engage in the history of ideas for its own sake They remain unhistorical wherever possible and become historical only to indicate places where the history of ideas is itself part of the dialectic of ideas

Not all of the great ideas are involved in an historical dialectic to the same extent At one extreme with ideas like Beauty Chance Courage Definition Education Emotion Happiness Infinity Justice Knowledge Love Nature Opinion Pleasure and Pain Punishment Sense and Tyranny the discussion seems to be comparatively unaffected by the historical location of the minds engaged in it It completes almost the same circle of logical development in every period the focus does not change from time to time the discussion as a whole does not move irreversibly along the line of history The Introductions to

such chapters therefore can be largely unhistorical in their dialectical effort to state the main features of the discussion

At the other extreme with such ideas as ANGEL ASTRONOMY CONSTITUTION DEMOCRACY ELEMENT EVOLUTION FAMILY GOD IMMORTALITY LABOR LOGIC MATHEMATICS MECHANICS PHILOSOPHY PROGRESS PROPHECY RELIGION SIN THEOLOGY WAR AND PEACE and WEALTH the discussion seems to be seriously affected by intellectual and cultural differences between different epochs The whole conversation shifts its ground and changes its focus as it passes in the spheres of politics economics and the sciences from ancient to modern times and in the spheres of religion and theology from pagan antiquity to the Christian Middle Ages or from mediaeval Christendom to the increasingly secular culture of the modern epoch Its starting points are not the same and its logical development takes different directions as the whole discussion develops historically Hence the Introductions to such chapters must be historical in treating the pivotal points of the dialectic

To the extent to which the Introductions treat the great ideas historically they trace their development in a number of ways They may call attention on the *semantic side to changes in the meaning of the basic words from period to* period On the analytical side they frequently note which parts of the idea—which of its topics or themes—occupied the center of discussion at one time but received little or no attention at another Above all in relation to the dialectic of the discussion they try to suggest the actual course of the great conversation By observing its continuities and discontinuities especially the latter they throw historical light on the failures of the dialectic—the failure of minds to meet or join issue or as between the thought of one period and that of another the weakening of relevance to the breaking point

If on the whole the Introductions lean more to the dialectic than to the history of the great ideas the balance is somewhat restored by the fact that under each topic the references to the great books are arranged in historical order The reader who follows the discussion by reading the books or passages in the order in which they are cited will be able to discover for himself many historical collocations and sequences which the Introductions fail to note where they are only suggested or briefly touched on in the Introductions *they are amply documented* in the References

Yet even here the complementary point remains to be made Under each topic the references are set forth in historical order But the books and passages cited under one topic would not be there unless they all satisfied the requirement of relevance They can be relevant to one another only if they are talking about the same thing Such relevance signifies that all the authors belong to the same tradition or in other words that they all participate in the same culture or civilization no matter how it may be subdivided into epochs or phases

From the point of view of world culture which must remain unformed so long as the world remains divided into a number of distinct cultures what we call the culture of the west is unitary in spite of all the separate strands or segments we

can find in it From the point of view of world history which in a strict sense cannot begin until a world culture is formed the thirty centuries of imagination and thought represented in the great books tend to become a single time even as the books tend to belong to a single tradition and culture By taking the point of view of future world history we can imagine how the whole tradition of western culture may some day appear as a single parochial episode In a sense the Intro ductions are making this imaginary construction when they present the great conversation in the present tense as if it were taking place among contemporaries

(3) *The analytical aim* The Outlines of Topics present analyses of the great ideas The Introductions perform an analytical function in commenting on the structure of the ideas as set forth in the Outlines

The Outlines do not explain themselves for the most part the order and subordination of the topics do not need explanation But occasionally the reason for including or giving special prominence to a certain topic or group of topics may not be immediately obvious especially if the matters dealt with are not familiar to contemporary thought The converse is also true Occasionally, the absence of topics which are currently subjects of great interest may deserve a word of explanation The Introductions try to throw light on both these aspects of the Outlines

The major parts of the discussion of a great idea are the fundamental problems and issues in which that idea is involved In commenting on these the Introduc tions usually adopt the topical statement of them in the Outlines Though there is seldom a perfect correspondence between the content of the Introductions and that of the Outlines there is a general conformity between the main points treated in each Their order is not necessarily the same for a discursive treatment of related problems and issues usually demands an order markedly different from that suitable to a topical outline

In many chapters topics will be found in the Outline which are not considered in the Introduction There are two reasons for this First the Outline of Topics for a particular idea usually raises more points of importance or interest than can be treated in a short essay Therefore some must be ignored or mentioned only in passing Second the Outline in a particular chapter frequently includes topics which are similar to or identical with topics in other chapters Hence to avoid repetition and undue length the Introduction to a particular chapter may leave to another chapter s Introduction the treatment of a subject common to both

Wherever possible the Introductions notify the reader that a given topic receives attention or ampler treatment in the Introductions to other chapters Just as the Cross References for a given chapter indicate the relation of its topics to those of other chapters so the Introduction supplies its own cross references to other Introductions in which related matters are discussed In doing this the Introductions not only indicate but often try to illuminate the interconnection of the great ideas In addition to examining the structure of the idea with which it deals it is part of the analytical aim of each Introduction to place this idea in

the larger structure of the whole set of ideas and especially in the constellation of closely related ideas to which it belongs

In performing their function as commentaries on the Outlines of Topics the Introductions usually pay special attention to the groups of doctrinal topics which set forth the positions or views of different authors in their own language The fact that doctrinal topics could not be avoided in the Outline for a particular chapter indicates both semantic and analytical difficulties which the mere statement of doctrinal topics seldom solves completely Wherever possible the Introductions attempt to deal with these difficulties discursively and to clarify points that the elliptical statement of the topics necessarily leaves obscure. But the groups of doctrinal topics call for more than clarification They usually represent a profound difference of opinion or a many sided controversy in the tradition of the great books In treating such matters the Introductions go beyond their semantic and analytical functions to the dialectical which is their primary aim

(4) *The dialectical aim* The Introductions attempt to report some of the major issues or basic intellectual oppositions in the sphere of each of the great ideas That this is their primary aim does not imply that disagreement is the dominant feature of the intellectual tradition On the contrary agreement in almost every case accompanies disagreement that is on most of the great issues the opinions or views which represent opposite sides of the dispute are shared by several authors often by many Seldom do we find a solitary exponent of a controversial position

The great issues align men side by side as well as range them against one another If in the rare case disagreement does not carry with it a proportionate amount of agreement that disproportion is balanced by the fact that on a small number of fundamental questions there seems to be no disagreement among the authors of the great books On the whole there is as much agreement as disagreement in the tradition of western thought—agreement across the centuries as well as among contemporaries and disagreement likewise

The primacy of the dialectical aim of the Introductions follows from the primacy of the mind s concern with truth The other aims represent preparatory considerations—how language has been used to express thought how thought has been affected by historic circumstances the ground thought has covered in dealing with the great ideas All these preparations lead to the question they leave unanswered Where does the truth lie in all the thinking that has been done on each of the great ideas? Where is thought true and where is it false?

The dialectical aim of the Introductions is primary because it is motivated by this fundamental consideration In their concern with agreements and disagreements the Introductions approach the question of truth and falsity The agreement of men about the nature of things in any field of inquiry establishes some presumption of the truth of the opinions they commonly hold Their disagreement establishes the counter presumption—that none of the opinions in conflict whether shared or not may be wholly true Among conflicting opinions one may

of course be wholly true and all the rest false but it is also possible that each expresses some portion of the whole truth and except for flat and isolated contradictions (which seldom if ever occur in the great conversation) it is even possible that all the conflicting opinions may be false just as it is possible for that opinion to be false on which all seem to agree Some opinion as yet unexpressed—at least not discoverable in the great books or in other books—may be the truth or nearer to it In short agreement and disagreement raise no more than a presumption of truth and falsity a presumption which further inquiry can always challenge or rebut

This being the case the Introductions in their dialectical effort must fall short of answering the question which is the mind s fundamental concern They would be dogmatic not dialectical if on any of the great issues they asserted or tried to prove the truth or falsity of any view They would simply become one more voice in the perennial debate on fundamental issues They refrain from doing this in order to do something else

The point is not that one more voice carries no weight in the forum of human discussion The point is rather that a different type of contribution to the pursuit of truth can and should be made Moreover it is the only contribution the Introductions can properly make as an integral part of a syntopicon of the great books These are not isolated essays published by an author in his own name They are Introductions to chapters on the great ideas in the great books They introduce the Outlines of Topics Together with the topics they lead the reader to the References and prepare him to read interpret and judge what he finds in the books and passages there referred to

The special contribution the Introductions try to make to the debate of perennial issues consists in being resolutely dialectical throughout The special quality they try to achieve can be summarized in two words dialectical objectivity[6]

[6] The w rd d ale t c l b j ct ty m y be n w b t th ideal th y pres is ld It has al ay been the d l f tl e cy lopa dist a d the g eatness of e y l paedia can almost be m as ed by the closeness of t pp m t t th d l

I h P f tory N t e t tl 9tl d t f th E cy l paed a Br t n a the Ed t T S B y wr t that i th fl t of pi a work l k th E cycl pa dia is t c lled upo t tak y dir t pa t It h t d w th k wl dge rath th n op d to de l w th ll ubj t f m t c l d l to l r the th a dogmatic p nt f w It n t b th gan of ny s t o p ty i Sci R l g o Pl l sophy It m d ty to g ve c rate ac o t of th f t d impartı l mm ry f es lts cry d p tm nt f qu y d sear l

I th P f tory M te l t the t th d t o f the E y lopa dia Br ta ca J m B y q t d th f g g p r gr ph f m B y s nd add d Th E cy l pa d Br ta tself ha n d o pa ty it tt mpts t g e p se t t t all pa t es ct nd des E e y ff t h be n m d t btai mpa tially s h t tem ts of d t e d bel f n matte f r l g and m l r q ti as a e at f ctory t th wh h ld th m and t de l w th these q estions so fa r t m c d s l a way that th o ts al po t m y be nd r tood nd pp eciat d w th t p ej d ce t the g m t The easy way t what som t mes co sider d mpa t l ty t l e o tro rsy ut lo g h that w ld b t a d r po ib l ty at th c st f pe petu t g g a f r it is o ly i th l ht of th t i abo t th m th t the mporta f thes q e tions f doctr e a d p c be real d Am d th ty f bel fs wh h h ld w tl c c t by o t of peopl o a th imp t l ty does n t t c l g t m r n withh ld g th k wl dg f d g nt p b t tt t de f t fic pe t wh h p e se n tat g bel fs th t ms, a d a co d g t th t p t t p ed by those who h l d it. And n an th r pl c Bry e d He who wr tes a t t se ft w te t t p his o n th y d d p ag th tl e e of tl rs b t w k f ref s h l e pa t sa h p wo ld be p h d d d as th f re usually a ded.

They try to look at all sides and take no sides Of course they fail to achieve so exacting an ideal They may succeed as the topics do in taking no sides Just as the topics state subjects on which there can be different opinions without affirming or denying any of the possible opinions so the Introductions try to present the issues without prejudice to any partisan point of view and treat conflicting positions impartially But it is easier to take no sides than to look at all sides In this latter respect the Introductions undoubtedly fail

To begin with it is never possible to say that *all* possible sides of an important issue have been examined They can never be exhaustively enumerated The answers and arguments to be found in the great books are always weighty and significant and are usually a fair sampling of the best human thought on the subject but they never exhaust the possibilities of thought Secondly it is seldom possible for the Introductions within the limits of a short essay to examine even all the answers and arguments in the great books and even if some selection can be justified on the ground that it chooses the most significant opinions or the principal arguments it still remains a selection Finally even those positions and arguments selected for examination and summary may not all be viewed with an equally open mind or presented in an equally favorable light Perfect dialectical objectivity is not guaranteed by avoiding explicit judgments on the truth of conflicting opinions Partiality can intrude itself in a variety of subtler ways—by the manner in which arguments are summarized by shades of emphasis and neglect by the tone of a question or the color of a passing remark and by the order in which the various positions are presented

In order to avoid some of these faults or at least to minimize their impairment of dialectical objectivity the Introductions resort to an obvious device and use it as much as possible They report the opinion or argument of an author in his own language substituting quotation for summary Quotations may of course be wrenched out of context and their sense may be falsified by the way in which they are quoted But since each introductory essay is associated with references to the great books citing fully all the passages from which the quotations are taken (and many more besides which provide the rest of the context) the reader of the Introductions is protected against such discrepancies as may occur This device of quotation provides the Introductions with a safeguard against the greater danger of summarization In addition it gives them the flavor of the great conversation itself It offers the reader a sample of the wealth of material cited in the References

Only the writer s firm intention to avoid them can be relied on to prevent other sorts of defection from dialectical objectivity Dialectical objectivity demands a deliberate effort to balance question against question to forego any comment that might be prejudicial to check any tendency toward over or under emphasis The reader can judge for himself the extent to which such effort has been successful in the writing of th Introductions On all these counts the measure of dialectical objectivity achieved should be evident But the reader cannot easily judge its achievement on the one remaining count—the order of discus ion in the Introductions

For example many Introductions end with the exposition of a particular author s theory of a controversial subject and sometimes with a quotation unaccompanied by comment Does this signify approval of the author s position on the question? In presenting a number of conflicting positions the Introductions must necessarily expound them in some order Does the theory coming last in the series have the favored place or does the first? The assumption behind these questions (which arise naturally enough) is that the writer of the Introductions may have intellectual convictions which influence his ordering of the discussion even though he does not allow himself to express them explicitly in the form of judgments about what is true or false

That assumption is partly correct No mature mind can be without convictions But they do not necessarily constitute an insuperable obstacle to maintaining the dialectical detachment sought for in the Introductions If the writer can refrain from expressing his own judgment about what is true and false he can also though perhaps with more difficulty exercise sufficient caution to prevent his convictions from influencing the order in which he treats a variety of opinions one of which he may hold as his own He can do this by making certain that the views he himself favors do not uniformly occupy the same place in the order of discussion—whether that be first or last

A deliberate effort was made to avoid uniformity in the order of treatment The result of this attempt cannot be judged by examining a single Introduction but by taking the 102 Introductions as a whole the reader can observe whether uniformity has been avoided

The reader s final judgment on the attainment of their dialectical aim can be made in terms of a test much more relevant than any examination of details of method or order in the Introductions If a dialectical balance has been preserved the reader should be left with the major questions to answer for himself He should be left with the major issues unresolved unless he has resolved them in his own mind If he has any opinion as to where the truth lies it should be his own formed by him in the light of his reading not pre formed for him in any way From the Introductions themselves he should derive only three types of opinion (1) that for each of the great ideas these are *some* of the questions or issues worth considering (2) that for each of the questions or issues mentioned these are *some* of the answers or solutions and (3) that some of the questions are so connected that answering one of them in a certain way partly determines how others must be answered

If the Introductions do more than this they overstep their dialectical limits for more than this would be to declare one answer true and another false But if they do this much neither more nor less then they neither exceed their bounds nor fall short of their mark And if with respect to the three types of opinion they do try to assert the Introductions win the reader s acceptance then they have for him as much dialectical truth as can be attained

IT SEEMS APPROPRIATE AT THIS POINT to say a word about the writing of the Introductions

They were written by the Editor in Chief of *The Great Ideas* In a few cases preliminary drafts of the essays were prepared by the General Editor Drafts of all the essays were read and criticized by the Editor in Chief of *Great Books of the Western World* by editors on the staff of the Syntopicon and by other persons who generously accepted the task of reading and commenting on them

The suggestions for revision from all these sources were collated to guide the writing of a final draft In this as in most collaborative efforts the final responsibility for accepting or rejecting suggestions rested with one person The Editor in Chief of *The Great Ideas* assumed that final responsibility of authorship To some degree then the Introductions as published bear the authority of a group of minds working in collaboration but they do not pretend to be that anomalous thing—a composite literary production

In their report of the traditional discussion of the great ideas the Introductions reflect their author s reading of the great books They also represent some knowledge of the books listed in the Additional Readings it should not be necessary to say that no one—certainly no one responsible for the content of the Introductions—has read all this literature As for the great books no one can claim to have read them all equally well or to have read all of them systematically and carefully for their relevance to each of the 102 great ideas That kind of reading was hardly feasible before the Syntopicon was constructed The Introductions were being written at the same time that the references to the great books were being compiled topic by topic idea after idea

One fact about the writing of the Introductions deserves repetition and emphasis They were conceived as parts of the Syntopicon and constructed in relation to the other parts especially the Outlines of Topics and the References According to this conception of their purpose they were written not for scholars or specialists but for the general reader—or more specifically for future readers of the great books

This last point calls attention to one of the difficulties faced in writing the Introductions They could have and would have been written quite differently had they been intended for an audience of persons already familiar with the great books Should such persons read the Introductions they may need to be reminded of this fact Some readers may have devoted considerable time to the study of a particular author or group of authors as measured by the depth of their own scholarship the Introductions may appear superficial or inadequate in the treatment of those authors Other readers as a result of their own scientific or philosophical work may hold certain of the theories discussed in the Introductions as measured by the complexity of their own speculative involvement the Introductions may appear to present imperfect or over simplified versions of these doctrines Such persons are asked to remember that the Introductions try to give some account of *all* not just a few of the authors of the great books and to present for each of the great ideas a dialectical treatment of conflicting opinions not a scholarly exposition of particular doctrines considered in isolation This they try to do in a manner suited to the layman not the specialist—for future readers of the great books not past masters of them

From the standpoint of the lay reader the Introductions may have defects of an opposite sort The effort to make them intelligible to a person who has not read the great books—or certainly not studied them—involved a constant struggle against space limitations It was often necessary to use certain technical words or phrases which have an established traditional meaning without bein able to explain their significance in readily understandable terms For example for brevity of reference it was often necessary to use such expressions as Kant s categorical imperative Hegel s Absolute Idea Spinoza s infinite modes Freud s repression Newton s evanescent quantity or Ptolemy s epicycles but it was not always possible at the point at which they were used to explain their meaning

When the Introductions are obscure or cryptic for this reason a remedy is available for the lay reader The language of the Introductions is keyed to that of the topics The reader can therefore go to the topic which contains the difficult word or phrase under it he will find references to the book in which that expres sion is amply explained by the author who made it part of his technical vocabu lary In some instances the difficult expression does not appear in the language of the topics but as used in the Introductions it may be associated with the name of a particular author The remedy is still to go to the References find the citations of that author s work and look there for its meaning

THE BREVITY OF THE INTRODUCTIONS makes them dependent upon a reading of the great books under the guidance of the topics and references for the amplifica tion of meanings This is also true of many of the concepts and theories they deal with Brevity of treatment with or without quotations from authors will leave the reader in need of fuller explanation For the reader who is left perplexed by the Introductions the References provide a direct route to the better under standing he seeks

The brevity of the Introductions even helps to fulfill the primary purpose of the Syntopicon as a whole which is to serve as a stimulus and a guide to reading the great books Reading the Introductions can never be a substitute for reading the books The Introductions were designed to create and leave unsatisfied an appetite for understanding The quotations from the great books which they contain are always as the volume of the References indicates a small proportion of the quotable material The topics with which they deal at any length are always a small proportion of the topics under the Outline for each idea

The Introductions are thus at best intimations of the great conversation They are in short introductions and in addition to all their other aims they have a seductive aim which succeeds whenever the reader is prompted by perplexity doubt curiosity or wonder to go from the Introductions to the References and from them to the great books Since the Introductions usually employ the lan guage of the topics the reader is seldom left in doubt as to where he can find the additional material he seeks

There is one other deficiency in the Introductions which results from their brevity and it too has its remedy The interconnection of the great ideas is such

that sometimes the same points—the same problems issues concepts or theories —deserve treatment in the Introductions to more than one chapter Since the Introductions appear in the alphabetical order of the ideas each had to be written so that it could be read as an autonomous essay This consideration made desirable the repetition of certain matters in two or more Introductions but the amount of repetition was sharply limited by the requirement of brevity

In consequence certain matters highly relevant to the dialectic of a particular idea were reserved for treatment in the Introductions to other ideas Wherever this occurs the Introductions cite the other chapters in which these points are more amply treated Thus though any particular Introduction may be obscure because it does not fully explain all the notions or doctrines to which it alludes other Introductions provide the reader with a remedy

As for the great ideas so also for the Introductions to the chapters on them the alphabetical order conceals the intricate and highly significant pattern of their interdependence or co implication This order permits the reader to begin with any Introduction or to read any one without first having to read others But though the Introductions were designed for such use they were also written with an eye to the total pattern of the great ideas It is part of their aim to take the reader wherever he starts and lead him from one idea to another along paths that crisscrossing in all directions cover the whole circle of ideas

IV THE REFERENCES

THE REFERENCES WHICH FORM THE CENTRAL PART OF EACH CHAPTER are the heart of the Syntopicon More than either the Introductions or the Outlines of Topics the References represent a reading of the great books Quite literally each of the 163 000 references enumerated under the 2987 topics represents an examination of a book in whole or part for its relevance to the topic under which the reference is given

The reading necessary to record the 163 000 references could hardly be done by one man or even a small group of men within so short a time as seven years The great books could be read through once in that time but a first reading would obviously be inadequate to the task of discovering the contribution each makes to the thousands of themes which comprise the length and breadth of the great conversation Nor could the situation be very much improved simply by a second or third reading The *References represent a different type of reading*

To use a comparison which may help to explain the difference the ordinary reading of a great book is like photographing a richly complex scene taking it in as a whole by seeing the picture from a certain distance whereas the kind of read ing which produced the References is like a close up viewing one detail in that scene and making it stand out as clearly as possible As a photographic close up presupposes the picture of the whole as background so reading with a special focus presupposes the ordinary perspective in reading In terms of this analogy each of the 2987 topics is a special focus on the 443 works comprising *Great Books of the Western World* and in addition the 77 books of the Bible

It might almost be said that to produce the References this body of literature had to be read with a special focus as many times as a real difference in the topics required a change of focus At least that is the effect the References create for the user of the Syntopicon The references under each topic provide him with a special set of readings *in* the great books produced by reading *through* them with a particular theme or question in mind

The necessity of employing a fairly large staff of readers to create the references for a syntopical reading of the great books and the Bible combined with inevitable changes in personnel over a period of seven years raised the problem of achieving a unified result from the collaboration of so many minds If for example two readers understood the same topic differently they would not be reading the books from the same point of view when they selected passages to be cited in the references under that topic With a staff of thirty to forty readers the possibility and extent of such discrepancies were multiplied many times The difficulty of obtaining a unified result was aggravated by other circumstances such as the number of books which had to be read the different kinds of reading demanded by their variety and the number of topics which had to be considered in relation to one another

Just as the Introductions have unity because they were written by one person so ideally the References ought to have a comparable unity—as if so to speak all the reading they represent had been done by one man yet safeguarded against the blindnesses and biases of any individual mind by having that one reader consult with many others in order to weigh and verify his interpretation of the texts

Under the exigencies of time and in terms of inescapable human limitations the unity of the References could not be achieved in that way To explain how a sufficiently unified result was obtained from the collaboration of so many minds and to throw light on the problems faced in compiling the References it seems useful to relate briefly how the work was done

THE WORK OF COMPILING THE REFERENCES was accomplished in three distinct phases a preliminary or exploratory phase a middle period devoted to systematic reading and discussion and a final phase in which the references were critically reviewed and edited

At the beginning of the work the staff of readers cited books or passages for their relevance to one or more of the great ideas The list of ideas was still tentative and each idea was treated as a heading by itself without subdivision into topics Each member of the editorial staff was assigned a particular group of authors and was responsible for discovering their contribution to the discussion of all the ideas

The most important result of this initial exploratory phase was the realization of the need for a topical analysis of each of the main ideas The second and more systematic phase of the work began when the list of 102 ideas was finally determined and a topical analysis of each idea had been drafted In their first formulation the topics reflected the reading done in the previous period but they also

required that reading to be re done for the sake of testing the topics and im proving the references

In the concomitant development of the Outlines of Topics and the References refinements in syntopical analysis and syntopical reading had to keep pace with one another At each stage the topics directed the course of syntopical reading and syntopical reading tested the topics for their accuracy and adequacy as statements of the themes discussed in the great books Each stage involved a renewed examination of the books in the light of the topics and an adjustment of the topics to the discoveries of research Topics were discarded new ones were added topics were rephrased or merged with one another The next stage of reading had to respond to all the changes in topics caused by the previous stage This meant a systematic examination of the references which had been assembled at the previous stage and a continuing search for new references to ensure an adequate treatment of the books under the topics as then formulated

It was crucial to the idea of the Syntopicon that the editorial staff share a com mon understanding of the topics and the books But the division of labor which had been adopted tended to make the individual reader a specialist in handling a particular group of authors and works Each member of the editorial staff developed special knowledge of certain books special skill in reading them syn topically and special articulateness in calling attention to the problems raised by his authors and books

Regular staff conferences were instituted to overcome the disadvantages of such specialization as well as to take advantage of its benefits Conducted by the Editor in Chief with assistance from the General Editor the conferences aimed to produce a community of understanding by considering the meaning of each idea and its topics in relation to the content of the great books as a whole They also provided an opportunity for individual staff members to criticize the Out lines of Topics from the vantage point of a concentrated syntopical reading of a few assigned authors and to suggest changes in the topics to accommodate the thought or language of those authors

The proposed changes had to be considered by other staff members for their effect upon the syntopical treatment of other authors Any change that was finally adopted had consequences for the work of the entire staff It was the task of the *Editor in Chief to harmonize the* different often conflicting demands made on the developing structure of the Syntopicon by the content and intellectual style of particular authors and to balance the special interests urged by individ ual staff members against the general aim of making the Syntopicon reflect the content of the great books as a whole [6]

T ma tai th t dy fl w f w k, k p ra d f w k d and ha g m d d t mak thes re d cu tly ailable f in pe t by th ed al taff was orm l cal d taki g *Th r t f thes* l bors ca best be d ca ed by th f t that d g th mai ph se f the w k th l l taff d d t ppo t d th ed t ial ff t w tw th times l g th th ed t l t ff F th m h t ks b pe f m d w mply l cal h y l d d bl d rst d g f th m ial be g ha dled W t t f th t llige t dir ti d g la t perv f all h w k by h E ti Ed th Assist t Ed t rs Ed t ri l Assista ts d S pervisors rs m d transm tting th mat ials from ne t g t th m ght h ia ed he tir ed t ri l ff t

The system of specialization during the first two phases of the work necessitated a complete re-examination of the references in order to achieve greater unity and coherence than could be attained simply through staff conferences To secure these results the final re-checking of the references had to be organized in a way radically different from the way in which the references had been originally accumulated and checked

Prior to the last phase of the work no one of the 102 chapters had as a whole been scrutinized in all details nor had any one person examined for the topics of each chapter all the references to the great books Where before each member of the editorial staff had been responsible for finding and judging passages in a small number of books in relation to all ideas and topics it was now necessary for some one person to be responsible for examining and judging all the passages cited in a single chapter In no other way could the coherence of the references under each topic be assured In no other way could a uniform standard of comprehensiveness and intelligibility be maintained for all the topics in a given chapter

Under the direction of the Editor in Chief the General Editor and the three Associate Editors undertook this final critical reading The 102 chapters were divided among them Each chapter was examined as a whole by one editor each of its topics was considered in relation to the whole range of the great books The problems raised by this study of whole chapters were discussed in general conferences at which decisions were reached for the resolution of difficulties The close collaboration of the five editors during this final phase of work was the nearest approach to the ideal of unity which the dimensions of the task permitted

Both the critical nature of the work during this last period and the character of the editorial conferences required an articulation of general policies together with an explicit recognition of the discretion needed in applying them It is therefore possible to give in the rest of this discussion of the References an account of the principles which governed their compilation and may guide their sustained use

THREE GENERAL PRINCIPLES CONTROLLED the compilation of the References They can be stated as criteria for the acceptability of references proposed for each topic and even for the tenability of the topic itself in the light of those references

The first principle was the criterion of *relevance* The acceptability of any reference under a particular topic depended upon its relevance to the meaning of that topic This principle though simple in itself was extremely complex in application because of the many types and degrees of relevance which topical headings make possible Some indication of this can be given by an enumeration of the main types of relevance A book or passage was judged relevant to a particular topic if it

—expounded one or more of the points made in the topic
—analyzed the meaning of the topic
—explained the significance of the topic
—affirmed one or more of the propositions implied by the topic

—denied one or more of the propositions implied by the topic

—questioned doubted challenged or suspended judgment on one or more of the propositions implied by the topic

—assumed one or more of the propositions implied by the topic in order to develop the consequences of such assumption

—interpreted the meaning of the topic in relation to other matters not stated in the topic such as its presuppositions or implications

—exemplified the topic by providing illustrative instances from poetry history or science

—illuminated the topic by taking it as a point of departure for discussing related matters

—satirized the topic or those who discuss its meaning seriously

These types of relevance are not mutually exclusive For example a particular passage may analyze the meaning of the topic as well as affirm or deny one or more of the propositions it implies Furthermore not only do these various types of relevance have unequal weight but also within each type passages differ in the degree of their relevance to a particular topic Hence the judgment of a reference in terms of relevance involved more than a determination that it was or was not relevant in one of the ways enumerated

The book or passage in question had to be judged for the degree of its relevance in itself and by comparison with other relevant materials There was no exact measure for the minimum degree of admissible relevance The judgment was finally made in terms of the character of the particular topic and in the light of all the other references under consideration References were often rejected for negligible relevance as well as for irrelevance The references now remaining [illegible] each topic are there because they were finally judged to be substantially [illegible]

The second principle was the criterion of *coherence* As we have already [illegible] in considering the construction of the topics a normal topic tends to [illegible] matic ambiguity that is a number of related meanings Systematic [illegible] a middle ground between absolute univocation or unity of meaning [illegible] equivocation or multiplicity of meanings The few topics with [illegible] meaning raised no problem since a reference was either [illegible] meaning or not relevant at all The problem of coherence [illegible]

The coherence of the references under a particular [illegible] being relevant not to the *same* meaning in all cases but to [illegible] example two passages each of which may be relevant in [illegible] the meaning of the topic become incoherent if the [illegible] the topic are utterly unrelated to one another Strictly [illegible] passages but the topic which becomes incoherent if it [illegible] construe it as having a number of *unrelated* meanings

The principle of coherence was therefore an [illegible] relevance It required that the topic read in the light [illegible]

should if it had many meanings always remain systematically ambiguous and never pass into the sheer equivocation produced by unrelated meanings It also required that a common thread of meaning should run through all passages referred to under a particular topic, making each passage relevant to the others as well as to the topic itself This did not mean of course that all passages would be mutually relevant either to the same degree or in the same way just as the principle of relevance did not demand the same type or degree of relevance to the topic of all passages placed under it

The remedy for incoherence was to reject certain references which did not fit with others under the same topic If there were two sets of references which did not form a coherent whole one set had to be rejected

In some instances the troublesome references constituted a small proportion of the whole collection and the problem was easily solved by rejecting these and retaining the rest But in other instances the sets of passages which did not fit together were about equal in number and importance or at least each set was sufficiently numerous and important to deserve retention In these cases the usual solution was to formulate a new topic under which one set could more properly be placed leaving the others under the original topic which then became coherent through the removal of the first set Sometimes two new topics were formulated to replace one which had collected several mutually incoherent sets of references

The principle of coherence automatically prevented topics from dividing into two or more sets of completely incoherent references but it left to judgment the degree of coherence required to maintain the unity of a given topic involving a number of related meanings The result of these judgments should be that all references found under any topic not only fit the topic but fit together under it and have to some degree the unity of a common subject matter of discussion

The third principle was the criterion of *sufficiency* This applied to topics not to individual references In the final stage of work each topic had to be judged to determine whether its collection of references was sufficient to justify its retention

As the principles of relevance and coherence guided the editors in correcting errors of commission so the principle of sufficiency directed attention to errors of omission and caused a search for materials to supply the deficiency It was never possible of course to be certain that all errors of omission had been corrected Errors of commission were detectible in materials which could be thoroughly examined but to be sure that errors of omission had not been made in the treatment of a particular topic would have meant on each occasion of doubt the reexamination of 443 separate works and 77 books of the Bible

Hence the judgment as to the adequacy of a given set of references always involved doubt It is certainly not claimed for the references under the 3000 topics that they constitute a *full* collection of the relevant passages in the great books But the effort to check errors of omission was diligent enough to permit the claim that the references under each topic constitute an adequate representation of what the great books say on that subject

In terms of this standard the principle of sufficiency operated to question the retention of topics whose references judged to be an adequate collection did not seem to make a substantial contribution to the great conversation as a whole At various stages of work topics were rejected for insufficiency in content Those which remain meet the standard of sufficiency in two ways the references they subsume have been judged to be an adequate representation of the great books on that subject and as represented by these references what the great books have to say has been deemed of sufficient substance for consideration

THE APPLICATION OF THESE THREE CRITERIA was necessarily affected by the different kinds of topics under which the references were placed For example the standard of sufficiency could not be the same for a restricted doctrinal topic as for one designed to comprehend every variety of doctrine A topic restricted to the doctrine of a single author or a small group of authors was judged to have sufficient content if the references adequately represented that author or group

The principles of coherence and relevance did not operate in the same way for simple and complex topics In the case of complex topics involving two or more related points one passage might be relevant through its bearing on one of these points and another passage through its bearing on some other point Thus the coherence of all the references under a complex topic had to be judged differently from the coherence of those under a simple topic

Though the topical ideal was *comprehensiveness (which meant being open to* all sorts of books as well as every variety of doctrine) it was not always possible to formulate topics which had such comprehensive coverage As already indicated some topics were construed more narrowly and some more broadly some were restricted to discursive passages and some were open to both discursive and exemplary passages some were developed under a strict policy of referring only to passages right on the point and others were developed under a looser policy of referring to passages having a more remote relevance to the point perhaps even dealing with peripheral matters

According to these and other differences among the topics the three principles had to be differently applied as the exigencies of each topic demanded Relevant references were sometimes rejected because of the policy governing the construction of a particular topic The degree of coherence achieved in certain topics was much greater than that in others In general however it can be said that the more complex the topic or the more comprehensive the range of its references the more its references will vary in degree and type of relevance Less coherence was required for such topics than for more restricted ones

IN THE LIGHT OF THESE GENERAL PRINCIPLES qualified as they must be for different kinds of topics the following more particular points can now be made about the references assembled under any one topic

(1) *The order of the authors cited* Under each topic the references are arranged in the order of the volumes in the set This places the authors in a roughly chronological order In two respects this order deviates from strict chronology References to the Bible are always placed first in spite of the range of time covered by the books of the Old and New Testament To have placed these books in a more accurate chronological relation to the other books would have divided the references to the Bible into several distinct groups

The other reason for deviation from strict chronology is the association of two or more authors in the same volume For example the works of the three astronomers—Ptolemy Copernicus and Kepler—are published together in Volume 16 The position of this volume is determined by the date of Ptolemy the earliest of the three In consequence though Ptolemy is rightly placed after Tacitus (Volume 15) and before Plotinus (Volume 17) Copernicus and Kepler are made to appear in the list prior to Augustine and Aquinas who were chronologically their predecessors The association of Galen with Hippocrates in Volume 10 displaces Galen by many centuries Harvey is displaced by being combined with Gilbert and Galileo as is J S Mill by being combined with the authors of *The Federalist* These are the major exceptions to strict chronology For the most part the reader who follows the order of the references under a particular topic will be following the discussion in the order of its historical development

(2) *The order of the passages cited for a particular author* Normally a reference to the work of an author involves the citation of two or more distinct passages often quite a large number Each of these citations is a unit reference making up the whole complex reference The order of these unit references follows strictly the order of the pages in the volume to which reference is being made When several works by one author are included in one volume these works are arranged in chronological order wherever that can be done Hence if the complex reference to the works of a single author involves the citation of passages from several of his works these passages will usually be cited in the order in which they were written

For the reader the importance of this fact is negative The order in which passages are cited is *not* the order of their significance as contributions to the discussion of the particular topic When many passages are cited they are not all of equal substance Some are capital texts expressing the essence of the author's views on the subject Others are subordinate texts which add qualifications amplify or extend the major discussion or may be of quite peripheral significance

The reader cannot understand or assess the contribution of a particular author to a given topic until he has distinguished for himself the capital from the subordinate texts The order in which the various passages are cited does not help him to do this Their arrangement by pages rather than by importance was a practical necessity Knowledge of this warns the reader that the first passages to which the references direct him may not be—in fact they seldom are—the principal ones

(3) *Whole and part citations* References to a given work may be either to the whole work or to a part and part citations vary in length from a large section such as a book or chapter to a small passage consisting of a series of paragraphs or a single paragraph or even less In the case of scientific and philosophical writings whole works are very infrequently cited though large sections ranging from a whole book or chapter to a number of such divisions may often be referred to The citation of whole poetical or historical works is more frequent

The reason for this difference lies in the difference to be considered presently between the relevance of discursive or expository passages and that of narrative or exemplary passages In advance it need only be said that the primary relevance of a narrative work whether an epic or a dramatic poem a novel or a play usually consists in the exemplary significance of the whole narrative This is less true of historical than of fictional narratives Historical episodes occupying a few pages of an historical work are more frequently cited for their exemplary significance than are whole historical narratives whereas in the case of fictional or poetical narratives often nothing less than the whole story will make the point though here as with histories episodes may also be cited

In contrast for expository or discursive relevance it is seldom necessary to cite the whole of a scientific philosophical or theological work and even the citation of large parts is necessary less frequently than for historical and poetical works A short series of paragraphs a small paragraph or even a few compact sentences will often make the point adequately

Thus the amount of reading recommended by the references under a particular topic varies not only with the number of unit references contained under that topic but also with the number of whole works and large parts cited in pro portion to the number of relatively small passages It may be thought that the citation of whole works or even of large parts tends to defeat the purpose of the Syntopicon since no reader can reasonably be expected to read this much in the course of a syntopical reading of the great books in relation to a particular topic But the purpose for which whole works or large parts are cited does not require them to be read every time they are referred to

It is assumed that the reader will gradually acquire acquaintance with whole works and will then appreciate somewhat the significance of references to whole works or large parts without re reading Furthermore even prior to such ac quaintance with whole works these references inform the user of the Syntopicon of the range of literature relevant to a particular topic even if at the time they necessarily leave him in ignorance of some of the content

In other words the citation of whole works by title performs a useful function even if all the recommended reading cannot be done at one time The shorter passages cited can be read and will provide an indication of the content of a topic so that the user of the Syntopicon will have the background and the motivation for doing the more extensive reading that may have to be postponed Not to have cited whole works or large parts simply because of the extent of reading involved

would have resulted in a distorted and inadequate representation of the relevance of the great books to many topics

Several devices were used in constructing the references to help the reader in handling references to whole works or large parts

The first simply enables him to recognize at once whether a reference cites a whole work or a large part of it as a whole unit As indicated in the Explanation of Reference Style when the page numbers immediately follow the title of a work without separation by a comma the reference is to the work as a whole Similarly when a chapter or other part of a work is cited and the page numbers immediately follow without separation by a comma the reference is to that part as a whole The presence of the comma indicates that the reference is to some passage in the whole work or in one of its parts The absence of the comma notifies the reader that he is being referred to a whole work or to the whole of one of its parts

The second device is the use of the symbol *esp* which stands for especially Frequently the citation of a whole work or a large part is accompanied by a number of references to short passages within these wholes These references to smaller parts are preceded by the symbol *esp* This is done where it is feasible so that the reader without reading the whole can go immediately to the places where the author makes his point in compact form or most emphatically However the passages especially cited—even a long series of them—can never be taken as an adequate substitute for the whole

The third device serves a purpose quite opposite to that of the second It was not always possible to cite a number of short passages for special reference within a large whole This could be either because nothing less than the whole work was relevant to the topic or because the passages which showed the relevance of the whole were so numerous and so diffused throughout that an enumeration of them would be impracticable In the latter case the symbol *passim* was used to notify the reader that he could discover the relevance of the whole by beginning to read almost anywhere within its boundaries and by reading as much as seemed to suit his time and interest When the citation of a whole work or of a large part is unaccompanied by either *esp* or *passim* the reader is offered no alternative to reading the whole

(4) *The boundaries of the references* The problem of boundaries occurs only for references to passages which are less than a whole work or a whole part such as a whole chapter or section In the case of wholes the boundaries indicated in the references are of course the opening and closing pages But for any passage which is less than a recognizable part or section of the work the boundaries aim to give the user of the Syntopicon a unit of reading which combines maximum brevity with maximum intelligibility

Ideally the passage cited should begin at whatever paragraph or line the relevant material begins and it should end similarly with the paragraph or line after which the material ceases to be relevant The method of citing half pages for

volumes printed in a single column of type and quarter pages for volumes printed in a double column—described more fully in the Explanation of Reference Style—made it possible for the references to indicate the initial and terminal boundaries of a passage with some precision But to locate the beginning or end of a passage within a quarter or a half page still leaves a margin of uncertainty and so the reader must often exercise some judgment to decide precisely where the passage begins and ends The boundaries of the passage are given with absolute precision only where the reference includes line numbers In all other cases the boundaries are only approximately indicated

The Explanation of Reference Style explains how boundaries are shown by page numbers and sections and by author s divisions and line numbers The problem to be discussed here concerns the editorial effort to combine maximum brevity and maximum intelligibility in the determination of boundaries

These two aims were often in conflict there was always the risk of diminishing the intelligibility of the passage by narrowing its boundaries for the sake of brevity or compactness there was always the opposite danger of introducing diffuseness and even irrelevance by extending the boundaries for the sake of making sure that the passage would be adequately intelligible No rule could be formulated for effecting the compromise which would always *maximi e* both values In fact the determination of boundaries called for a different kind of judgment in referring to different authors and even to different works of the same author It was much easier for certain types of writing than for others—easiest perhaps for the mathematical and scientific works most difficult for the poetical and historical works especially in the citation of narrative passages having exemplary relevance

It cannot be expected that boundary problems were always perfectly solved In a certain proportion of the references the passages may be either too long or too short But even in these instances the margin of error is probably not very great—not enough to put the user of the Syntopicon to much trouble or inconvenience

(5) *Kinds of passages and kinds of books* We have already referred to the difference between the relevance of discursive or expository passages and the relevance of narrative or exemplary passages This is a distinction which divides all the references into two main groups No matter what the type or meaning of the topic under which it is cited every passage cited is relevant in one of these two ways It either discusses the topic or illustrates its meaning Sometimes the same passage does both though it usually is predominantly of one sort or the other

It might at first be thought that the great books would also divide into two groups—those providing expository and those providing exemplary passages To some extent this is true Since they are essentially discursive writing the great works of mathematics experimental science social science philosophy and theology naturally tend to yield references which have expository relevance—expounding explaining analyzing affirming denying doubting arguing The

great works of poetry or fiction of history and biography being narrative in form naturally tend to yield references which have exemplary or illustrative significance But there are important exceptions in both cases

The great narrative works whether poetical or historical contain essentially discursive passages The fictional or historical characters in the narrative think and speak about a vast number of the themes which constitute the topics of the 102 chapters Wherever in the course of a narrative men speak or think in an orderly sequence such speeches or trains of thought may have discursive relevance to one or more topics Furthermore in many of the great poetical and historical works the author speaks in his own person on themes germane to his narrative These passages are of course discursive and may have expository relevance

On the other hand the great discursive works of science philosophy and theology contain passages which are exemplary or illustrative in their significance These passages differ in one important respect from the illustrative materials in the poetical and historical works They are seldom if ever narrative in form For example a scientific treatise will contain descriptions of experiments performed a mathematical work will contain particular demonstrations and such passages may have exemplary or illustrative significance for a topic dealing with scientific theory or method

There are a few exceptions to the rule that expository or discursive works do not contain narrative passages which can be cited as exemplary The myths and stories told in the dialogues of Plato are certainly narrative in form But these passages almost always contain material which is implicitly if not explicitly discursive They are among the best instances of writing which seems to have both sorts of relevance to the same topic Other instances are passages containing descriptions of scientific experiments accompanied by theoretical comments of general significance

The Bible is unique perhaps in respect of the frequency with which its passages combine both sorts of relevance There are of course many purely narrative passages in the Old and the New Testaments as there are many which seem to contain preachment or precept exclusively But a very large number of biblical passages combines example with precept or parable with preachment It may even be said that the most famous and striking passages in the Bible transcend the distinction and have a type of significance or relevance uniquely their own

Nothing in the way a given reference is symbolized or recorded notifies the user of the Syntopicon which kind of passage is being cited In a few instances he may be able to guess what to expect from the nature of the work referred to If a narrative work is cited as a whole or even in any large part its significance for the topic will almost necessarily be exemplary rather than expository But if the passage cited is relatively small then even in a narrative work the passage may be either expository or exemplary In general this is also true of the citation of all or large parts of expository works Here as before relatively small passages may be of either sort Where no clue is provided by the general character of

the work being cited the user of the Syntopicon can discover the significance of the passage only by reading it

(6) *Series of references which have collective significance* It has already been pointed out that the references under a particular topic are unequal in their relevance to it References were sometimes rejected because their relevance was too remote or slight But sometimes an opposite policy was followed A reference which by itself might have been judged insubstantial or remote took on greater significance when read in the light of other references under the same topic In consequence it was retained both for what it added to the whole collection of references and for its own increased significance as a member of that collection

A collection of references possessing a certain unity through the inner relation of its members was most frequently constituted by a series of passages from the works of a single author But sometimes references to one author were judged in the light of references to others A given author s contribution to the discussion of a certain topic might be slight if taken by itself but it gained interest in relation to the utterances of others on the same topic and so otherwise slight passages were retained because of their value as members of the whole collection of references under that topic

This information about the way in which the references were often constructed to achieve a collective effect may help the user of the Syntopicon One who examines *all* the references under a topic will usually find that some of the authors cited are major and some minor contributors to the discussion He will also find that for a single author some passages referred to make a major and some a minor contribution

The person who has read through all the passages bearing on a topic will have little difficulty in discriminating between the major and the minor voices in the great conversation on that theme The elements of the collection will tend to assume their proper places and proportions But to one who is still in the process of reading the passages in the order in which they are cited the collective significance of the whole and of each part as a member of it will not be apparent

Such a person will encounter many passages whose content does not seem to justify their inclusion If he bears in mind that a passage may have more significance within the collection than it has alone he will suspend judgment on its worth until he has gone further in his reading under that topic Unless an error was made the questionable passage is there because it was judged that the reader would eventually ee more of interest in it than first meets the eye by re reading or remembering it in the light of other passages

The chapter on MAN contains a good example of a large collection of references which have more significance collectively than they do individually The topic reads Cultural differences among men Greek and barbarian Jew and gentile European and Asiatic Of the more than one hundred passages cited it can almo t be said that no single one by itself deals adequately with the subject of cultural differences among men or even with the specific cultural differences

mentioned But references to the Bible form a significant collection on the distinction of Jew and gentile and so do those to Gibbon The series of references to Herodotus Thucydides Plato Aristotle and Hippocrates forms a significant collection on the distinction of Greek and barbarian The references to Montesquieu and Hegel are significant on the distinction between European and Asiatic Some of the references to Hegel taken together with those to Darwin and Tolstoy form a collection which illuminates the subject of cultural differences in general Thus the whole set of references is adequate to the topic in a way that no single reference or small group of them is

A collection of references may also be used to achieve an intelligible rendering of the contribution of narrative works poetical or historical Where the whole narrative could not be cited it was often possible to select a series of episodes—particular scenes and events—which read successively would have the cumulative effect of illustrating the topic This is often the point of a long series of references to Herodotus Tacitus Plutarch and Gibbon or to Homer Virgil Dante Milton Tolstoy Dostoevsky and Melville

With discursive works there was less necessity for grouping references to achieve a cumulative effect But even here it was often true that only a certain number of the passages referred to had independent significance whereas others depended for part of their significance on the context provided by the collection However it should be added that for most of the great works of science philosophy and theology the number of passages which could be cited for their independent significance exceeded the number which could be cited only in the context of others

In the light of these considerations two general rules can be formulated to guide the reader in interpreting the materials recommended for his reading

1 The location of a passage under a topic reflects the judgment that it is relevant in some manner and degree to the subject in question but it does not indicate the kind of relevance or whether the relevance is dependent on other passages The reader must discover that for himself

2 To discover the significance of a particular passage the reader must consider it in relation

   a to the kind of book from which it is taken

   b to other passages from the same book or other books by the same author

   c to passages from other authors cited under the same topic with some attention to their chronological order and to the kinds of books written by the different authors being considered

   d to the collective significance of the whole set of references

One other observation should be added Very frequently the same passage is cited under different topics of one chapter as well as under the topics of different

chapters The user of the Syntopicon may meet the same passage many times as he goes from topic to topic or chapter to chapter A moment s reflection will discover the reason for this

A passage rich in content is naturally relevant to a large number of different topics and deserves as many different readings as are necessary to exhaust its meanings Each topic under which it is cited directs the user of the Syntopicon to read th passage in a different way—interpreting it in the light of that particular topic A previous reading of the passage in another connection will usually not suffice for an understanding of its relevance to the topic under which it now appears

This is particularly true of passages open to conflicting interpretations Such passages will appear in the same chapter under topics which express a conflict of theory or opinion and must be examined in the light of these topics if the reader wishes to discover how they are susceptible of such conflicting interpretations

WE MUST NOW CONSIDER A NUMBER OF EXCEPTIONS to the rules just stated The rules may guide the user of the Syntopicon in interpreting what he will normally find in the references but they do not take account of deviations from the norm Perhaps these deviations can be best described by enumerating the three kinds of special problems which arose in constructing the references (A) those caused by the special character of certain topics (B) those caused by the special character of certain books and (C) those caused by considerations of scholarship or by difficulties of interpretation

(A) PROBLEMS CAUSED BY THE SPECIAL CHARACTER OF CERTAIN TOPICS

(1) *The distinction and relation between supraordinate and subordinate topics* This distinction has already been sufficiently explained in the section of this Appendix dealing with the topics (see pg 1247) The supraordinate topic is a heading under which the subordinate topics logically fall as making particular points or as elaborating the meaning of the supraordinate But some supraordinates function *only* as logical headings for a number of subordinates whereas other supraordinates function also as topics *in their own right*

The supraordinates which are only headings have no references cited under them They are from the point of view of content empty All other supraordinate headings have references under them just as their subordinates do But because of their special character as supraordinate topics their reference content tends to differ from that of subordinate topics

Supraordinate topics were used to collect in one place all passages dealing in general terms with points treated in particular terms in the passages cited under the subordinate topics *or* they were used to list references to whole books or large parts of books while references under the subordinate topics cited shorter passages

These methods of developing a supraordinate topic were frequently combined When a supraordinate was developed according to either or both methods its references tend to cover the same ground as do those of all the subordinates together The supraordinate will refer to the most general or the most inclusive passages which are divided among the various subordinates Since the subordinate topics state particular points or cover parts of the whole subject indicated by the supraordinate they will contain many passages not cited under the supraordinate

The usual difference in reference content between a supraordinate topic and its subordinates is this the passages cited under the supraordinate cover without distinction all the points which are divided among the subordinate topics the passages cited under each of the subordinates were selected to distinguish the discussion of one of these points from that of others

One example may clarify the relation between supraordinate and subordinate topics In the chapter on LANGUAGE the Outline of Topics opens as follows

1 The nature and functions of language the speech of men and brutes

1a The role of language in thought

1b The service of language to society

2 Theories of the origin of language

2a The hypothesis of one natural language for all men

2b The genesis of conventional languages the origin of alphabets

The two subordinate topics (1a and 1b) make particular points generally covered by the first clause in the wording of supraordinate topic 1 Similarly in supraordinate topic 2 the two subordinates (2a and 2b) deal with particular aspects of the theory of the origin of language Accordingly the reference content of topics 1 and 2 will include much that will also be found under 1a and 1b 2a and 2b but without any discrimination of the particular points which their references provide

Some of the reference content of the supraordinates will not appear under either of the subordinates because certain passages are so general as to be relevant only to the supraordinate topics Similarly certain passages because particular in their significance have relevance only to the subordinates and appear only there

Topic 1 in the chapter on LANGUAGE happens to illustrate another point which holds true for a number of supraordinate topics Topic 1 is complex The part preceding the colon states the main theme the part following a subordinate theme The subordinate theme is itself a special point in the general discussion of the nature and functions of language Hence it is mainly the first part of topic 1 which functions as a supraordinate for topics 1a and 1b

The reference content of this complex supraordinate topic will therefore include besides those passages that belong in a supraordinate passages relevant to the narrower special point made in the part of the topic following the colon

These passages will not reappear under the subordinate topics unless they are relevant there for other reasons as for example a discussion of human and animal societies might deal in this connection with human speech and animal cries What is true of this complex supraordinate topic holds generally for all complex supraordinates which in part state general themes that cover the particular points made in the subordinate topics and also in part state particular themes of their own

One other kind of topic which is not strictly a supraordinate because it has no subordinates under it sometimes resembles the supraordinate topic in the range and character of its reference content That is the opening topic of a chapter which frequently stands alone For example in the chapter on CITIZEN the opening topic— The individual in relation to the state —has no subordinates neither does the opening topic in the chapter on CONSTITUTION— The difference between government by law and government by men the nature of constitutional government

Both of these opening topics have maximum generality for the range of discussion covered by the whole chapter In a sense therefore they can be regarded as logically supraordinate to all the topics which follow Accordingly such opening topics will include among their references many passages that will be cited again under later topics

In the light of the foregoing consideration of supraordinate topics the following recommendation is made to the user of the Syntopicon If he is interested in the *whole ground* covered by the supraordinate topic together with its subordinates he will generally find it profitable to examine first the passages cited under the supraordinate If however his interest is only in some particular point treated in one of the subordinates he can go directly to the passages cited under that topic He can supplement this later by turning to the broader materials referred to under the supraordinate or even perhaps by turning to the materials cited under other subordinate topics In general he should bear in mind that references listed under a supraordinate will more frequently cite whole books or longer selections therefrom than will references listed under the subordinates

(2) *Restricted or doctrinal topics* Ideally a topic should be phrased so as to comprehend every variety of relevant doctrine and include materials from every type of book. But as we have already observed (see pg 1239) a certain number of topics fall short of this ideal of comprehensiveness Either their wording restricted them to the doctrine of one particular author or a special group of authors or they were construed strictly rather than broadly so as to exclude certain types of material Usually the strictly construed topics excluded passages of exemplary rather than discursive relevance

These facts about *restricted topics are repeated here merely to advise the user* of the Syntopicon not to expect the same range of materials in the reference content of all topics For example he should not always expect to find exemplary passages along with expository ones though had the topic been construed less

strictly such passages might have been there because they are relevant Nor can he always expect to find all the passages with discursive relevance to a particular subject if its treatment has been divided among a number of separate doctrinal topics In such cases he must look to a whole group of related doctrinal topics to cover all the relevant authors and books

Even within a single topic different authors were sometimes treated differently because the special contribution of each could be most effectively handled in a somewhat different manner For example one author might be cited only for his major utterances on the subject whereas another might be represented by an almost complete collection of the passages from his works including those of minor as well as those of major relevance This was the result of a judgment that on the topic in question one author s complete position should be examined while for another author only that portion of his work which bears directly on the subject need be considered

One other special point deserves mention here though it does not belong to the problem of the restricted topic Certain topics as noted (see pg 1237) state comparisons contrasts distinctions or differences Ideally to be relevant to such a topic a passage should deal explicitly with the comparison etc But not all the references listed under such topics cite passages explicitly on this point Some deal explicitly with just one of the terms being compared and involve the other only by implication sometimes they do not consider the other term even by implication These passages are cited on the ground that the comparison proposed by the topic is to be found in the set of references as a whole if some passages deal with one and some with the other of the terms to be compared

In a few rare cases of topical comparisons or distinctions no passages could be found which made the comparison or distinction explicitly and yet the sense of the tradition on that point could be gathered from a series of passages dealing with one or the other of the two terms

(3) *Contrary or contradictory topics* Quite frequently a supraordinate topic states a problem or issue on which there are a number of opposed points of view the subordinate topics severally state the opposite views Sometimes a general subject of inquiry is announced by the supraordinate topic and its subordinates propose various theories of the matter contrary to one another in some way

Such sets of topics presented a special problem in constructing the references In the ordinary case in which a topic not only stated the issue but aimed to cover all controversial positions taken on it the set of references was developed to include both affirmations and negations of the point at issue or all sides of the controversy But when a number of topics explicitly set forth the controversial positions the reference content of each topic was restricted in the following way

Passages which expressed a view in any way contrary to the view stated in the topic were not cited on the ground that some other topic stating that contrary view was the proper place for the citation of the contrary position But if a particular author in developing his own theory explicitly commented on the position

of an adversary the passage containing that explicit commentary was judged relevant to both topics—the topic stating the view opposed by the author as well as the one stating his own view If however an author s expression of his own opinion constituted the denial of some other view *only by implication* the passage in which that author s opinion was expressed was cited only under the positive topic and not under the contrary one as well

A glance at the structure of the Outline for a particular chapter and a quick examination of the wording of its topics will tell the user of the Syntopicon in which way controversial issues were handled—whether by single topics covering all sides of the controversy or by separate topics representing opposing sides In the former case the reader can expect to find contrary views expressed in passages cited under a single topic in the latter he will find only affirmative opinions in the passages cited under each of a set of contrary topics and perhaps also explicit criticisms of each position by its adversaries

(B) PROBLEMS CAUSED BY THE SPECIAL CHARACTER OF CERTAIN BOOKS

(1) *The Bible* No other book in the western tradition has been subject to such extensive interpretation or to interpretation based on such incompatible principles as for example on the one hand the principles of higher criticism which treat the Bible as a secular document and on the other hand the principles of exegesis peculiar to a text considered to be the sacred and revealed word of God Let us deal with this second point at once since it is paramount for the significance of all references to the Bible

The Bible especially the Old Testament is to a certain extent an historical book It reports the events of Jewish history it describes the customs of the Jewish people and the gentiles with whom they came in contact it deals with the political and social institutions of the Jewish tribe the Jewish state and the kingdoms of Judah and Israel Biblical passages of an historical tenor were therefore found relevant to topics dealing with customs social practices and political institutions But citing them under such topics did not prejudge the issue whether the Bible is sacred writing or merely an historical record like any secular history

Those who in the light of their religious faith read the Bible as Sacred Scripture do not exclude the historical or literal sense as one mode of interpreting it On the contrary they usually insist that the literal or historical sense must be the basis of all other interpretations—allegorical anagogical and moral

Nor is the issue of the two approaches to the Bible prejudged by any other aspect of its treatment along with references to the works included in *Great Books of the Western World* No matter what the topic under which the Bible is cited the reader is always left quite free to decide that issue for himself He can always read a biblical passage *either* as a portion of divine revelation *or* as human writing no different from other human literature

This is true even when the Bible is cited under topics which explicitly state a religious position either one common to Judaism and Christianity or one exclusively Jewish or Christian The reader is still free to interpret the passage either as conveying the divine revelation of the religious dogma in question or as conveying the opinion of Moses or Isaiah of Matthew or Paul on the subject

Of course a passage will not have the same meaning when read as the revelation pertinent to an article of religious faith as when it is read as the merely human formulation of a religious tenet but then though perhaps to a lesser degree passages from other books have different meanings for the man of religious faith and for the man without it

A second problem concerning the Bible was that of choice among different and often conflicting interpretations of particular passages especially those whose meaning has been much disputed throughout the tradition of biblical commentary This problem was solved as was the first by *not choosing* between conflicting interpretations If a particular passage on one traditional interpretation was relevant to a certain topic it was cited there If by another traditional interpretation it was also relevant to another topic even one contrary in tenor to the first it was cited there also This permits the reader to consider both interpretations and judge between them

Since biblical exegesis is in a sense an endless process it may be asked what limits were set to placing diverse interpretations on a particular passage The answer is that the work of citing the Bible was governed in large part by well established traditional interpretations and where these were not available the judgment was nevertheless made in conformity with generally accepted standards of interpretation and by analogy with the interpretation of similar passages

Still another problem concerned Christian interpretations of Old Testament passages which do violence to the Jewish sense of their meaning Such passages were treated in the light of both interpretations Therefore, the user of the Syntopicon should not be surprised to find passages from the Old Testament cited under topics which state specifically Christian doctrines denied by the Jewish faith These references do not prejudge the theological issues between the two historic religions of the West Failure to cite these passages in their Christian as well as in their Jewish sense would have meant failure to present these issues so far as the Bible is concerned

Finally there was the somewhat parallel problem of conflicting interpretations within the Christian tradition itself as between the Roman Catholic and the Protestant interpretations In general the problem was solved in the same way as that of Jewish versus Christian interpretations of the same texts But this problem was complicated by the incorporation of the divergent interpretations in two English translations of the Bible—the Douay and the King James

Not only are some crucial passages quite differently rendered in the two versions but the books of the Bible itself are often differently named or numbered and differently ordered to one another Certain books which the Douay version treats as parts of the Old Testament the current King James translation treats as

Apocrypha Even within particular books the numbering of chapters and verses is frequently different

Hence it was necessary to refer to both the King James and the Douay versions whenever there was even the slightest variance between them (This complica tion in the mode of citation of biblical passages is more fully treated in the Explanation of Reference Style) To whatever extent the treatment of the Bible approaches adequacy the thousands of paired citations giving King James and Douay equivalents in book chapter and verse constitute a concordance between the Protestant and Roman Catholic renderings of the Bible

This method of citing the Bible according to both versions whenever they varied led to one difficulty for which there was finally no satisfactory solution In a small number of cases the wording of a passage in one version made it relevant to a topic to which it was not at all relevant according to the language of the other version Under such circumstances to cite the passage would be to prejudge for the reader the rightness of one version as against the other Avoidance of this meant omitting some few passages which readers of one version would know and think relevant to the topic under which it was not cited What was thought the less unsatisfactory of the two solutions was chosen The error of omission was judged less grievous than the violation of the Syntopicon s rule of dialectical objectivity which demanded most insistently to be followed in such cases of con flicting interpretation

Errors of omission of this sort were unavoidable But they were in the very nature of the case not the only errors of omission since it was never possible to be sure that all traditional interpretations of the Bible from whatever source had been taken into account much less all the possible interpretations to which biblical passages are subject Furthermore the references to the Bible will be judged by many critics of quite different persuasions to contain grave errors of commission—serious misinterpretations of difficult texts which in consequence have been assigned to topics where they do not belong

The decision to include references to the Bible along with those to the works published in *Great Books of the Western World* was made with all these risks in mind It seemed better to undertake this task whatever defects or errors would certainly remain in the finished work than not to have the voice of the Bible present in the great conversation More than half the authors in this set quote the Bible refer to it or write with the Bible in mind The Bible could not be omitted from the references under many topics to which it is relevant and wherein the other books assume its presence

(2) *The poetical and historical books* Next to the Bible the great narrative works of history and fiction presented the greatest difficulties What was done here may be the subject of much controversy It may be held that the meaning of poetry—and to a lesser extent of history—cannot be comprehended under ideas or topics It should be said in reply that it is not claimed that the meaning of a poem like the *Iliad* the *Divine Comedy* or *War and Peace* is exhausted by references

which cite it as relevant to the consideration of certain ideas and topics The same disclaimer applies to the histories of Herodotus Thucydides Tacitus and Gibbon and to the biographies of Plutarch

A brief statement of the theory governing the syntopical treatment of such works may indicate some of the difficulties and prevent some misunderstanding of what was done The controlling theoretical insight was that abstract and concrete universal and individual are everywhere correlated For example the fictional character and actions of Achilles in the *Iliad* are ideas in concrete or particular embodiment The historical episodes reported by Thucydides in the struggle between democracy and oligarchy in the Greek city states present individual instances of certain universal propositions in political theory Again many passages in his *History of the Peloponnesian War* concretely exemplify the problems of might and right in the relation of states to one another

A political theorist would state these issues abstractly and universally and would perhaps formulate general conclusions as to the consequences of trying to combine democracy with imperialism A poetical historian like Thucydides makes such points concretely by telling the tragic story of what happened to democratic imperialistic Athens

To say that the whole of the *Iliad* can be cited under a topic on the relation of men and gods or that particular scenes or episodes can be cited under topics dealing with honor or pride or love is not to say that the poetic meaning of the *Iliad* can be exhaustively comprehended by such references even if they were themselves exhaustive of its content so far as that is relevant to the ideas and topics of the Syntopicon

To say that the *History of the Peloponnesian War* can be cited as a whole under certain topics in the chapters on JUSTICE or LIBERTY and to say that particular events in it can be cited under topics dealing with treaties between states military strategy or political revolution is not to say that such references even if complete would exhaustively represent the content or significance of the *History*

But neither is it claimed that the references to the great scientific and philosophical works exhaust their content or meaning No more is claimed for any work of either kind—narrative or discursive—than that the references to it represent more or less adequately its contribution to the great conversation on as many themes as it may have relevance for So far there is no difference The difference lies simply in the mode of relevance What one kind of work says abstractly in terms of general propositions and universal concepts the other kind says concretely in terms of individual characters and particular actions or events

The whole theory of the references to fictional and historical narratives under ideas and topics rests on the logic of example Logically to exemplify is to present individual or particular instances of a universal concept or a general proposition To abstract or generalize is the logical opposite of exemplification it consists in stating the universal concept or general rule which applies to a particular case and embraces all similar particulars as well Without going further into the logic of universal and particular of abstract concept and concrete ex

perience let it suffice to say that the references in the Syntopicon which have discursive relevance move on the plane of the abstract and the general whereas the references which have exemplary relevance move on the plane of the concrete and the particular

The basic theory underlying the collocation of references to expository and narrative works under the same topics is simply that the two planes run parallel to one another They are at all points correlative expressions of the same thing They are as inseparable from one another and as indispensable to one another as human thought and human experience Nothing which can be grasped by the human mind on one plane is incapable of expression on the other in fact nothing can be grasped by the human mind on either plane without also being available to insight or experience on the other

Using this theory as a basis for the syntopical reading of the great poetical and historical narratives did not prevent or solve all difficulties in the treatment of particular works It is impossible to give a brief account of these difficulties since they were as various as the works themselves Each narrative seemed to raise problems of its own It should be reported for whatever guidance it gives the user of the Syntopicon that all problems were not solved with equal success

The references to Tolstoy s *War and Peace* for example seem to be a better indication of its exemplary relevance to the topics than those to Dostoevsky s *Brothers Karamazov* The same difference appears between Milton s *Paradise Lost* and Goethe s *Faust* or between Gibbon s *Decline and Fall of the Roman Empire* and the *Histories* and *Annals* of Tacitus These works may have presented unequal difficulties some may have yielded more readily to a syntopical reading than others The other alternative is that the syntopical reading of these works was not equally well or imaginatively done In any case reading the narrative works to discover their exemplary relevance to the topics was always a more difficult task than reading them for their discursive relevance

A word should be added here about this second type of reading to which the narrative works were submitted A speech by Pericles or Hamlet can have the same kind of relevance to a particular topic as a statement on it by a philosopher or a theologian The poetical and historical works are rich in discursive relevance to many topics especially those dealing with moral and political subjects and hardly less so with respect to metaphysical and theological themes

But one distinction must be kept in mind in considering references to the thought contained in narrative works The thought of Pericles or Hamlet is not the thought of Thucydides or Shakespeare at least not in the sense in which the discourse of Marcus Aurelius Montaigne Darwin Marx or William James expresses the thought of an author speaking in his own person Sometimes an historian or poet speaks in his own person as well as through his characters Thucydides does and so does Gibbon Fielding and Tolstoy are at some pains to distinguish their own reflections from the thoughts of their characters In other cases no such distinction can be found because the author did not make it In all the plays of Shakespeare there is no word from the poet himself as distinguished from the utterances of his characters

What Shakespeare himself has to say is said only by his plays and only through the exemplary significance of narrative of character and action In contrast Tolstoy speaks in two ways—in an exemplary fashion through narrative of character and action and discursively through the passages in which Tolstoy himself discourses on a variety of subjects In addition both Shakespeare and Tolstoy have much to say discursively through the speeches of their characters But this indirect mode of speech must always be distinguished from the author s own discourse and certainly from the totally non-discursive—that is the exemplary—significance of the poet s creation of plot and characters

This distinction applies to a certain number of works not ordinarily classed as poetry or history The dialogues of Plato constitute a striking exception to the rule that the scientific and philosophical authors speak in their own persons The thoughts and speeches of Callicles Gorgias Thrasymachus Alcibiades or even Socrates himself are not direct discourse by Plato

Because they have the poetical form of dramatic narratives the dialogues of Plato presented a very special problem In one sense they had to be treated like the plays of Shakespeare A particular speech by a character in the dialogues was cited like a particular speech by a character in the plays—for its discursive content and without any judgment as to whether it expressed the thought of the author or the very opposite But since there can be no question that Plato used the dialogues to express his own ideas it was also necessary to construct the references to the dialogues so that they represented Plato s own opinions as well as those of his characters

In many cases this could be done by following the line of thought in the speeches of that one character which Plato used as his *alter ego* This was usually Socrates but sometimes another as for example the Athenian Stranger in the *Laws* In other cases it had to be done either by citing a sequence of discursive passages in which Plato s own argument or theory becomes clear or even by citing a whole dialogue These last two methods of representing the thought of Plato resemble the method of representing Shakespeare s thought by citing a sequence of dramatic episodes or the narrative content of a whole play

But the difference in the treatment of Plato and Shakespeare is as important as the similarity Whereas the representation of Shakespeare s thought was achieved only through the exemplary significance of whole plays or narrative episodes therefrom the representation of Plato s thought was achieved mainly *throu h* the discursive significance of whole dialogues or analytical and argumentative passages therefrom However in a few cases a dialogue was cited for its narrative as well as for its expository significance as for example the *Apology* which tells the story of the trial of Socrates or the *Crito* and *Phaedo* which tell the story of his imprisonment and execution

Though the dialogues of Plato are the most striking exception to the rule in the treatment of philosophical and scientific works similar methods were sometimes employed in other cases For example the *Two New Sciences* of Galileo is written in dialogue form Here as with Plato the opinions of the characters in the

dialogue were sometimes cited even though they were plainly not expressing the opinion of Galileo

The scientific and philosophical treatises of Aristotle are partly historical They usually give an account of the thought of others as well as expound Aristotle s own ideas The references to Aristotle therefore include the citation of passages which report opinions with which Aristotle may disagree—for example those of Parmenides Democritus Anaxagoras or others This does not involve passing judgment on the reliability of Aristotle s report Aristotle s summary is often the main or only historical evidence on certain doctrines in antiquity Were such passages not cited the discussion of a number of topics would be less rounded than it is

In only one case is an author s report of the views of others not cited in isolation from his comments thereon That is the case of Aquinas Since the statement of the objections—the opinions of others—in the *Summa Theologica* is always accompanied by replies and each reply is paired with an objection the objections are never cited by themselves

(3) *The mathematical and scientific books* The above paragraphs deal with the treatment of the expository works of science philosophy and theology insofar as they presented problems like those presented by narrative works of poetry and history Furthermore we have already pointed out that particular demonstrations in mathematical treatises or descriptions of particular experiments in works of natural science were often cited for their illustrative significance under topics dealing with the theories or methods of mathematics and science Such references do not differ in mode of relevance from those to particular episodes in narrative books They exemplify the point of the topic under which they are cited

But the mathematical and scientific books presented one difficulty peculiarly their own For example certain propositions in Euclid s *Elements* are relevant to a topic in the chapter on QUANTITY which deals with the relations of solids and with inscribed and circumscribed spheres But these propositions are not intelligible apart from prior ones on the properties of the circle—propositions not strictly relevant to the topic in question These should not be cited here but under another topic in the chapter on QUANTITY which deals with circles

No completely satisfactory solution could be found for the problem raised by the order of propositions in a mathematical treatise On the one hand to cite only the relevant propositions under a particular topic and to omit reference to all the prior theorems on which their intelligibility depends makes it necessary for the reader to discover these prior theorems for himself if he wishes to understand the propositions cited On the other hand to cite under a particular topic not only the mathematical propositions directly relevant to it but also all the prior demonstrations on which they may depend for their intelligibility would almost always frustrate the user of the Syntopicon by making him begin his reading with propositions of no apparent relevance to the topic in question He might have to go through a long series of propositions before he came to those bearing directly on the topic

Of these two alternatives the first was chosen as slightly less unsatisfactory The user of the Syntopicon will at least see at once the relevance of the propositions cited and recognizing his failure to understand these propositions in isolation he can remedy his difficulty by finding their logical antecedents He needs only to know that in the order of mathematical exposition later propositions depend upon earlier ones for both their demonstration and their intelligibility

This is true not only of strictly mathematical treatises but also of all the great works in mathematical physics such as Galileo s *Two New Sciences* Newton s *Mathematical Principles of Natural Philosophy* Fourier s *Analytical Theory of Heat* and the astronomical treatises of Ptolemy Copernicus and Kepler For example in the chapter on ASTRONOMY there is a group of topics on the particular heavenly bodies One of these deals with the moon and its irregularities Under that topic Proposition 66 in Book I of Newton s *Principles* is directly relevant But in Newton s exposition Proposition 66 depends on at least thirty prior propositions According to the policy followed only the one relevant proposition was cited the others were omitted because they were irrelevant even thou h absolutely necessary to the understanding of Proposition 66

Spinoza s *Ethics* written *in ordine geometrico*—in the geometrical order—clearly indicates that this special problem is caused by the nature of mathematical demonstration Its subject matter is metaphysical and moral not mathematical but the *Ethics* presented the same problem as Euclid s *Elements* or Newton s *Principles* because it used an order of exposition in which propositions are logically related as prior and posterior The method employed in referring to a mathematical work was therefore used also for Spinoza s *Ethics* just as the method employed for Plato s dialogues was also applied to Galileo s References to Spinoza s *Ethics* cite particular propositions without citing all the prior propositions on which they depend

The problem of referring to propositions in works written in a mathematical manner is an aggravated form of the more general problem faced in treating all expository works scientific philosophical or theological as well as mathematical As already pointed out it was frequently necessary to cite a whole series of passages some major some subordinate in order to present an author s thought on a particular topic adequately The significance of many of these passages especially the minor ones depends on the context of the others and since passages are always cited according to the order in which they occur the user of the Syntopicon is often asked to read first something which gains significance only from materials to be read subsequently But there are two differences

In the case of works not written in a strictly deductive order the passages cited first in a series of references may depend for their significance upon materials which come later whereas in the mathematical or deductive order later propositions always depend on earlier ones In non mathematical works all the passages in a series have some relevance to the topic in their own right whereas in mathematical works the prior propositions are strictly not relevant at all

(C) SPECIAL PROBLEMS OF SCHOLARSHIP AND INTERPRETATION

(1) *The problem of translations* More than half of the works included in *Great Books of the Western World* are translations If translations were always faithful to the sense of the original language this would raise no problem But as every one knows they are not All translations are subject to suspicion and almost none ever satisfies all competent scholars

Scientific or philosophical works are generally better translated than poetic works Translations from modern languages such as Italian French and German are usually better than those from ancient languages and among the latter translations from Latin are usually superior to those from Greek It might almost be said that no Greek scholar is ever perfectly satisfied with an English rendering of Greek poetry or philosophy

Even if the translations from Greek published in this set were the best available it would still be true that certain passages clearly relevant to particular topics in their English rendering become less clearly relevant or even irrelevant when read in the Greek The members of the staff who did the syntopical reading of the Greek books discovered this again and again

They raised a difficult question Were they to cite the passage according to its significance in the original Greek or in the English translation? If whenever there was a variance between original and translation the interpretation of the passage and its topical allocation were to be determined by the Greek wording the user of the Syntopicon would find passages in the English translation omitted from topics to which they are relevant If on the other hand the wording of the translation was to be the standard the reader would find Homer or Aeschylus or Plato cited under topics to which according to some good scholarship they are not relevant

At first this appears to be a choice between errors of omission and errors of commission Actually it was a deeper problem involving a decision as to the purpose the Syntopicon could and should serve Since the Greek books were being published in English it would have been totally impractical to make the references depend upon the sense of the Greek By reading the passages cited in English the reader could not possibly discover why they were relevant to the topic and in addition he would find relevant passages which were not cited Since the purpose of the Syntopicon is to guide the reading of the great books as here published the only solution however unsatisfactory it may be in some respects was to base the interpretation and topical allocation of passages on their sense in English translation

This solution applies of course to translations from all foreign languages But it is less unsatisfactory for the others than for the Greek books It will not seem unsatisfactory in any case to the general reader with only English at his command Since he must become acquainted with the great books in translation the

Syntopicon serves him well by referring to them as if they were all written in English The scholar may regret the distortions and errors necessarily consequent upon this policy but he is in a position to correct such errors wherever he discovers them

([illegible]) *The problem of interpretation* Almost all of the great books contain passages which even when translated with absolute fidelity or when originally written in English are difficult to interpret—passages on which there has been much scholarly commentary and on which competent scholars have long disagreed The topical allocation of such a passage according to one theory of its meaning would inevitably evoke criticism from the scholars of an opposite school

The solution of this problem was in part like that of the special problem of biblical interpretation the same passage was cited under different topics according to divergent or even conflicting interpretations of it As in reading biblical texts well known traditional interpretations were consulted and often followed

Here the great books themselves were helpful Later authors comment on earlier ones The interpretation of one great author by another was frequently available and was often influential in the syntopical treatment of a particular passage Even when two or more among the great authors disagreed in interpreting one of their predecessors it was still possible to follow their divergent readings of the passage by placing it under as many different topics as were suggested by the diverse meanings they assigned to it

To whatever extent the method of multiple interpretation and allocation was successfully practiced the references even to extremely difficult passages avoided the necessity of choosing between conflicting theories of their meaning But it cannot be claimed that *all* the recorded interpretations of difficult texts were followed in allocating those passages—not all the interpretations to be found in the great books themselves were used much less all those which can be found in the voluminous literature of scholarly commentary on the great books Again the policy was determined by the primary purpose of the Syntopicon—to serve the general reader of the great books rather than the scholar

A large number of scholarly interpretations of difficult texts are highly specialized They often involve an elaborate theory of the whole work and beyond that of the mentality of the author For the Syntopicon to follow such interpretations would only bewilder the general reader He would find passages cited under topics to which their relevance could not be apparent because it depended on hidden principles of interpretation

The controlling principle therefore was to place passages only under topics where their relevance would become apparent to the general reader either when he read the passage carefully in the light of the topic or read it carefully in this light and also in the light of some or all of the other passages cited under that topic Scholarly interpretations which did not permit the references to conform to this rule had to be ignored

(3) *The problem of the validity of the great conversation* The compilation of the references under topics and ideas construes the authors as talking about the same themes and even as talking to one another about them In the latter sense the great conversation is admittedly in part a fiction since earlier authors cannot actually talk to later ones Nevertheless logically their remarks on a subject often function as comment on or even rejoinders to the remarks of their successors Though they are chronologically arranged the references under each topic do not form a straight line but a circle in which any point may be diametrically opposed to any other The great conversation does not move irreversibly from past to present it moves in a circle of thought which partly transcends time

The assumptions underlying the construction of the references to represent the great conversation have already been stated and defended in this essay But the issue they raise between the historical and dialectical treatment of ideas deserves further comment here

In its most extreme form the position of historical scholarship is that each of the great authors certainly the greatest among them somehow managed to create an intellectual world entirely his own—peopled by his own ideas walled in by the unique systematic ordering which he imposed upon them and rendered incommunicable with other worlds by his private vocabulary According to this extreme position to talk with or listen to one of the great authors on any of the great themes it is necessary to gain admittance to his world with the keys provided by historical scholarship The keys are available to anyone who will take the pains to acquire them—to anyone except the great authors themselves who having constructed their own worlds insist upon talking and being talked to each in his own In one sense they lock each other out in another sense each introduces the others into his own world but always recreates them in his own image

According to this view of the history of ideas a genuine dialectic of ideas is impossible and the notion of the great conversation is an imposture The references which collect the authors under the same topic and present them as relevant to one another as well as to the same theme does violence to the principles and method of their work by blindly ignoring the innermost secret of their individuality If the passages cited by the references had been properly interpreted each according to the special lights of its author they could not have been placed side by side in this way

The issue raised by the most extreme form of historical scholarship thus finally comes down to a question whether the passages cited in the references were rightly interpreted The question cannot be decided simply by reading the passages for even if they do *appear* to be relevant to one another and to the same topic the historical scholar who denies the great conversation can always insist that the *appearance* results from a superficial reading and that the *reality* discernible only by a deeper understanding of the texts on historical principles is quite otherwise

The issue is one of conflicting assumptions—or perhaps presumptions If it is presumptuous on the part of those who constructed the Syntopicon to stand outside the great authors in an effort to align them in a conversation and engage them in a dialectic which they themselves did not always explicitly recognize it may be no less presumptuous on the part of the extreme exponents of historical scholarship to isolate the great authors from one another imprisoning each in his own intellectual world

No doubt the kind of complete immersion in the work of a single author which the best scholarship often involves tends to impress one with the unique and incommensurable character of his thought But the contrary impression can be as readily formed by a dialectical reading of the books At its best it also involves complete immersion not in the work of one author but in the tradition which somehow embraces them all

Whether a final understanding of the great books would favor the intellectual isolation or communion of their authors—or both—is a question that must be left to any reader who feels competent to make that judgment The user of the Syntopicon need not make it while in the process of using the Syntopicon He need only know that the Syntopicon was constructed on dialectical principles not on the principles of historical scholarship in their most extreme form

He will then realize that the interpretation of the passages cited in the references was based on the assumption that the books can be read together and can be construed as mutually relevant under many topics if not under all Whatever his own final judgment he will be guided by the knowledge that the creators of the Syntopicon were committed to the policy of trying to see the authors as somehow more in communion than in isolation

The creators of the Syntopicon acknowledge taking a position on this ultimate issue of interpretation This does not mean that they were unaware of or undisturbed by the difficulties of applying their principles The preceding discussion of the construction of the references consists largely of a recital of difficulties and of the frequent necessity of choosing the less objectionable of two unsatisfactory solutions

The effort to achieve dialectical comprehensiveness by means of systematic ambiguity in the topics may sometimes have stretched equivocation to the breaking point In other cases the margin of equivocation permitted may have been misleadingly and unhelpfully great In still others the unity among the authors may have been a thin thread as compared with the bulk of their differences But all these risks were knowingly undertaken in the interest of showing that the great authors can be read as though in conversation on the same question or topic even when their positions and language are so disparate that more cautious scholars would hesitate to ascribe unity to the topic or coherence to the conversation

The scholars take another sort of risk which the creators of the Syntopicon were unwilling to assume—the risk of asserting that the topics discussed and the questions answered by one author are incommensurable with the topics and questions

considered by another As between the dialectical unity of the western mind and the historical isolation of its individual geniuses the true meaning of the intellectual tradition can be discovered only by taking risks of both sorts Justice must be done to each author as an individual and to his place in the tradition

Throughout the preceding discussion the aim has been to assess the virtues and defects of the References to indicate possible errors of omission and commission and their causes and to consider the problems of interpretation which could seldom be perfectly solved

But even if no errors of commission had been made and no mistakes in interpretation the References would not represent an adequate comprehension of the contribution of the great authors or the content of their books The References merely try to indicate what the books have to say on these topics They undoubtedly have much more to say than can be exhausted by even a complete allocation of their contents under the 3000 topics that were chosen

The fact that certain authors or books yielded more readily than others to the method of the Syntopicon certainly does not mean that the latter are less rich or meaningful because they are represented by fewer references These defects and discrepancies naturally resulted from the effort to treat the whole set of books—the whole tradition rather than individual authors and works—as the object of study Therefore syntopical reading of the great books as a whole may necessarily be a more or less inadequate reading of each individual book The one need not be substituted for the other nor should it be

There is also inadequacy in the reverse direction Even if no errors of omission had been made the References would not represent an adequate discussion of the topics To take them as such would be to assume that what the great books have to say on these subjects exhausts everything that can be said or even everything that has been said Many topics of great significance have references collected under them which do less than complete justice to the problems or issues they propose The Outlines of Topics frequently include questions or themes on which other books especially concerned with these subjects amplify and in some cases add often substantially to what the great books have to say Therefore to round out the discussion a list of Additional Readings at the end of each chapter supplements the References assembled in that chapter

V THE ADDITIONAL READINGS

The works recommended were chosen to supplement the works contained in *Great Books of the Western World* They were selected for each chapter to round out the discussion of the idea and topics to which the great books make the principal contribution

The Additional Readings far from exhaust all the writings which could be listed as relevant to a particular chapter More than relevance was required The books chosen for each chapter had to make a significant and substantial

Furthermore it was impossible to ask a large number of scholars to check all the 102 reading lists At most they could be asked to examine a small number of them Yet it was desirable to obtain a certain degree of consistency for all the lists Therefore some effort had to be made to see that the same principles of selection were applied uniformly to all 102 lists This was done by a small number of consultants who reviewed and revised the complete set of reading lists each consultant considering all lists from the standpoint of some particular type of book—such as poetical works historical works mathematical and scientific works philosophical and theological works

Finally neither the specialists who gave advice on books in particular fields nor the consultants who examined all the lists could be expected to understand fully the precise purpose the Additional Readings were intended to perform in the Syntopicon For this they would have had to study the Outlines of Topics and also to know the range of the references under each topic To make the Additional Readings supplement the References chapter by chapter it was necessary to know on what points and in what way the discussion of each idea and its topics needed to be amplified

Since work on the References was in process at the same time that the Additional Readings were being constructed such knowledge was neither available nor easily communicable The final judgment on the content of the Additional Readings had to be left therefore to the editors of *The Great Ideas* In the last two years of work on the Syntopicon they revised the lists which had been constructed and corrected during the preceding years They had to assume responsibility for whatever errors of omission or commission the lists contained

A FEW WORDS SHOULD BE ADDED HERE to account for what scholars and specialists are likely to regard as errors of omission or commission As the Syntopicon was designed primarily for use by the general reader so also were the Additional Readings Consequently certain things were intentionally omitted though their importance and relevance could be reasonably defended

In many fields there is a vast periodical literature of important essays articles research reports and monographs Such literature is generally not available to the general reader who is limited to what can be found in bookstores or in local public libraries and seldom has access to the great collections of a few university libraries or a few public libraries of national standing Furthermore the monographs and papers which appear in the learned journals are usually extremely technical and their contribution to the discussion of a subject is usually narrow and specific rather than broad and general For these reasons no periodical literature was included in the Additional Readings except in the few cases in which papers or essays first published in learned journals were later collected and published as books and then only if these papers were not too narrow in their significance

For similar reasons the effort was made to cite only books written in English or translated into English though here there were more exceptions to the rule

In every case the exceptions had to be justified on the ground that the untranslated work was of such crucial importance or such unique significance that the discussion of the subject would suffer substantially from its omission This is especially true of the literature of antiquity and the Middle Ages some of whose basic works are not yet translated

To the reader with no foreign language at his command the inclusion of these titles is a recommendation which is now only instructive but may become useful at some future date It can be hoped that works not yet translated at the time of publishing the Syntopicon will progressively become available in English

The same general policy was followed in the case of works out of print and not available in any except a few public or university libraries It seemed purposeless to recommend to the general reader titles he could not procure in some edition either at bookstores or public libraries Yet here as before a certain number of exceptions were made on the ground that the particular title was of extraordinary value Since such works may once again become available through the publication of new editions these recommendations may also have some future usefulness

The chief criticisms of errors of commission are likely to be directed by scholars against some of the contemporary works included in the reading lists *i e* mainly works published in the last five or ten years to a less extent all works published in this century

Except for Freud s later writings this set of great books contains no works published in the twentieth century The reason is not that no great books have been written in this century Rather it is that not enough time has yet elapsed to give anyone the necessary detachment and perspective to decide which contemporary books belong with the great books of the past The factor of recency is responsible for considerable controversy over which books of the nineteenth century deserve to be classified as great and it is generally much easier to get a judgment approaching unanimity concerning the great books of antiquity and the Middle Ages than those of modern times

For the same reason the contemporary works listed in the Additional Readings are more likely to be criticized than all the rest It is much more difficult to assess their contribution or estimate their importance accurately When a sound judgment can be formed about them some will certainly turn out to have been overestimated

At the risk of such errors of commission a deliberate effort was made to include in the reading lists as many contemporary books as possible This seemed desirable because *Great Books of the Western World* stops short of this century and also in order to give concrete evidence that all of the ideas and many of the themes of the great conversation are subjects of inquiry and discussion by the most active minds of our own day That some contemporary books are recommended which may ultimately be judged unworthy seemed on the whole less of a disservice to the user of the Syntopicon than would be the omission of these books In trying to include the most recent publications the Additional Readings in some chapters cite original works published as late as 1950

INVENTORY OF TERMS

The Inventory of Terms is designed to facilitate the use of the Syntopicon as a reference book. By means of the terms here listed in alphabetical order, it directs the reader to the relevant topics in the 102 chapters, and thus enables him to discover what the great books have to say on the 3000 topics which represent the themes of the great conversation. The titles of the 102 chapters are included in this alphabetical list because each of the great ideas is also a term in topics of chapters other than the one devoted to its consideration.

In order to see the particular topic in the context of related topics, the reader should turn first to the Outline of Topics in which the particular topic occurs. Immediately following the Inventory (p. 1346), a table lists the pages in Volumes I and II of *The Great Ideas* on which each Outline of Topics appears. The Outline of Topics in each chapter directs the reader to the pages of its Reference section where the particular topic is treated.

EACH TERM IN THE INVENTORY is accompanied by references to the chapters and topics in which it is a significant element. The terms are the words or phrases printed in bold face type. Whole chapters are cited by both chapter number and name, for example, *see* CH 4: ART. Individual topics are cited by the name of the chapter and the number of the topic in the Outline of Topics of that chapter, for example, *see* ART 5a.

In each entry, topics are cited in the alphabetical order of the chapters in which they appear. However, whole chapters cited always precede individual topics. In some entries the citations are divided into two groups, those of primary and those of secondary significance. The first group is separated from the second by a diagonal line.

SOME WORDS CARRY A QUALIFIER in parentheses to indicate the sense in which they are being used. For example, **Balance** (*phys*) stands for the term *balance* as used in physics; **Crisis** (*med*) stands for the term *crisis* as used in medicine. When the same word is used in two or more senses, qualifiers indicate the distinct terms it represents. For example, **Function** (*biol*) stands for the term *function* as it is used in biology, and **Function** (*math*) stands for the term *function* as it is used in mathematics.

Terms which are the names of particular sciences, such as logic or biology, may be related to topics which treat the nature of the science itself, or they may be related to topics concerned with the subject matter of that science. The words 'science of' or 'subject matter of' following words like logic and biology, indicate which sort of topic is being cited. For a small number of such words, the qualifying phrase is not needed to determine the meaning.

Phrases are sometimes necessary to express a single term or to make its meaning definite, for example, **Law of contradiction**, **Military strategy and tactics**. The same purpose is served by pairing related or similar words, for example, **Appearance and reality**, **Franchise or suffrage**, and **History, historian**.

FOR COMMENT ON THE USE of the Inventory of Terms, see the Preface (Vol. I, pp. xi–xx), and for the general principles and methods of its construction, see Appendix II (Vol. II, pp. 1225–1228).

A

A priori and a posteriori *see* EXPERIENCE 2d; JUDGMENT 8c; KNOWLEDGE 6c(4); REASONING 5b(3) / *see also* MATHEMATICS 1c; MEMORY AND IMAGINATION 1a; SPACE 4a–4b; TIME 6c

Abilities (*psychol*) *see* LIFE AND DEATH 3; MAN 4–5a; SOUL 2c–2c(3) / *see also* ANIMAL 1a(1)–1a(4); HABIT 2b, 5–5d; KNOWLEDGE 6b; MAN 6a; QUALITY 2a; SOUL 2; VIRTUE AND VICE 2a

Abiogenesis *see* EVOLUTION 4c / *see also* ANIMAL 8b; EVOLUTION 4

Abnormal and normal *see* NATURE 2c

Abnormality (*psychol*) *see* DESIRE 6b–6c; DUTY 4b; EMOTION 3a, 3c–3c(4); LOVE 2a(2)–2a(4); MAN 5b; MEDICINE 6a–6c(2); MEMORY AND IMAGINATION 2e(1)–2e(4), 5c; MIND 8–8c; ONE AND MANY 3b(5); OPPOSITION 4c; PLEASURE AND PAIN 8c; PUNISHMENT 6; SIGN AND SYMBOL 6c; SIN 5; WILL 9b

Absolute *see* ONE AND MANY; OPPOSITION 2e / *see also* HISTORY 4a(3); IDEA 1f; MIND 10f–10f(2); PROGRESS 1

Absolute and limited government *see* CONSTITUTION 1; LAW 7a; MONARCHY 1a(2); T... 5–5c / *see also* CITIZEN 2b; C...

B

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LOCATION OF OUTLINES OF TOPICS